MOVING FORWARD 2050

SONOMA COUNTY COMPREHENSIVE TRANSPORTATION PLAN

scta rcpa

September 2021

PREPARED BY SCTA/RCPA

Moving Forward 2050 Project Staff

Suzanne Smith, Executive Director

Janet Spilman, Director of Planning — CTP Project Manager

Tanya Narath, Director of Climate Programs

Chris Barney, Senior Planner

Dana Turrey, Senior Planner

Brant Arthur, Community Affairs Specialist

Drew Nichols, Administrative Assistant

Design by Kim Dow at DowHouse

The SCTA would like to acknowledge the contributions of the SCTA Advisory Committees.

APPENDICES A-1

Tables

Figures

1.

INTRODUCTION

SONOMA COUNTY TRANSPORTATION AUTHORITY

The Sonoma County Transportation Authority (SCTA) serves as the coordinating and advocacy agency for transportation funding for Sonoma County. Proposition 111, approved in California in 1990, resulted in changes to the way transportation projects are planned and funded and authorized the creation of Congestion Management Agencies.

In November 1990, the SCTA was formed under the Local Transportation Authority and Improvement Act (Public Utilities Code Section 180000) and designated as the Congestion Management Agency (CMA) for Sonoma County. In 1997, the SCTA relinquished its position as the CMA under new state legislation that made the congestion management planning portion of this function optional but still carries out the general functions of a CMA.

> **The SCTA Mission Statement**
> *The Sonoma County Transportation Authority's mission, as a collaborative agency of the cities and County of Sonoma, is to work together to maintain and improve our transportation network. We do so by prioritizing, coordinating, and maximizing the funding available to us and by providing comprehensive, countywide planning. Our deliberations and decisions recognize the diverse needs within our county and the environmental and economic aspects of transportation planning.*

The SCTA is governed by a twelve-member Board of Directors. Nine of these members are chosen from the Councils of the nine incorporated cities or towns. The remaining three members are chosen from the County Board of Supervisors. Officers are elected annually. The SCTA holds monthly public meetings of the Board of Directors.

The SCTA is the countywide planning and programming agency for transportation related issues. The SCTA plays a leading role in transportation by securing funds, providing project oversight, and initiating long term planning.

The SCTA has legal and administrative requirements to fulfill in the capacity of a countywide transportation agency — some of these requirements are derived from regional agencies such as the Metropolitan Transportation Commission (MTC)/Association of Bay Area Governments (ABAG) and the Bay Area Air Quality Management District (BAAQMD), while others, come directly from the State, or federal government.

SCTA/RCPA BOARD OF DIRECTORS

Cloverdale
Melanie Bagby — 2019, 2020, 2021

Cotati
Mark Landman — 2019, Chair 2020, 2021

Healdsburg
Ariel Kelley — 2021
Joe Naujokas — 2019, 2020

Petaluma
D'Lynda Fischer — 2021
Kathy Miller — 2019, 2020

Rohnert Park
Gerard Guidice — 2021
Jake Mackenzie — 2020
Joseph Callinan — 2019

Santa Rosa
Chris Rogers — 2019, 2020, Vice Chair 2021

Sebastopol
Sarah Gurney — 2019, 2020, 2021

Sonoma
Logan Harvey — 2019, Vice Chair 2020, 2021

Sonoma County
Susan Gorin — 2019, Chair 2020 & 2021
Lynda Hopkins — 2021
Shirlee Zane — 2019, 2020
David Rabbitt — 2019, 2020, 2021

Windsor
Esther Lemus — 2021
Sam Salmon — 2019, 2020

Regional Climate Protection Authority

SCTA is partnered with the Regional Climate Protection Authority (RCPA), which was formed in 2009 to coordinate countywide climate protection efforts among Sonoma County's nine cities and multiple agencies. SCTA and RCPA share the same Board of Directors and the same goal to reduce greenhouse gas emissions (GHGs). The RCPA works with the jurisdictions to reduce GHG in all sectors and co-produced the Shift Sonoma County — Low Carbon Transportation Action Plan (Shift) with SCTA. The Shift Plan shows the path to reduce GHG in transportation by half, by 2030, critical to the CTP goal of Zero Emissions by 2050.

MISSION

RCPA leads a local government coalition to mobilize regional climate action in Sonoma County

VISION

Sonoma County is united in taking bold action to fight the climate crisis.

RCPA produces the GHG inventory, last updated in 2018 which revealed that transportation continued to be the largest source of GHG emissions at approximately 60 percent of total emissions. Transportation emissions have increased from 1.9 million metric tons carbon dioxide equivalent (MTCO2e) in 1990 to over 2 million MTCO2e in 2018, an increase of 7 percent. In contrast, Sonoma County achieved reductions in emissions from all other sources over the same time period.

In recognition of the need to accelerate progress on climate action, all ten of the jurisdictions in Sonoma County adopted climate emergency resolutions between 2019 and 2021. These resolutions were a response to the increasing urgency of taking action to mitigate and adapt to the effects of climate change.

This CTP supports the local climate emergency resolutions through recommended programs, policies, and projects that, when implemented, will contribute to the reduction of GHG emissions from the transportation sector. For more information see Chapter 4 and related technical appendices.

A History of Long-Range Planning

Over twenty years ago, residents and transportation officials convened in a series of town hall meetings to imagine how Sonoma County's transportation system should look in 2020. Among their findings: the transit system needed to expand; the highways required expansion and more efficient design; and a commuter rail system was needed. Local roads were charged to be safe and free of potholes; and to accommodate bicycle and pedestrian facilities. Sonoma County residents understood in 2000 the need for a convenient, cost-effective, environmentally friendly, and functioning transportation system. This sentiment has not changed. In addition, the community envisioned a coordinated public transit system with frequent service on core routes and a rail-ferry connection for travelers to reach areas throughout the North Bay and the San Francisco Bay Area.

Sonoma County's transportation system today includes a diverse mixture of highways, local streets and roads, bus service in and between every community, a commuter rail system, airports, and bicycle and pedestrian multiuse

pathways. Despite these accomplishments there remain many infrastructure needs.

MOVING FORWARD — A TRANSPORTATION PLAN FOR THE FUTURE

Moving Forward 2050 — the Comprehensive Transportation Plan (CTP) tells the story of Sonoma County's transportation system. The plan examines the current state of transportation in the county and looks at future needs and goals and provides information on how these needs and goals can be met. The CTP is updated frequently enough to ensure that the plan is still relevant, useful, and represents the current transportation needs and goals of SCTA and Sonoma County jurisdictions. The previous CTP was completed in 2016.

The importance of maintaining an updated planning document is two-fold. First, MTC requires local Transportation Authorities such as the SCTA to establish transportation plans that can feed into the larger Regional Transportation Plan (RTP). The RTP is a federally required, long range planning document that is now called Plan Bay Area. Second, the SCTA is responsible for programming, or allocating, numerous state and federal funding sources to transportation projects. In order to meet these requirements, the SCTA needs a policy and planning document to help guide the programming process. If the SCTA does not meet these two requirements, it is at risk of losing critical transportation dollars.

EQUITY IN TRANSPORTATION — THE COMMUNITY BASED TRANSPORTATION PLANNING PROCESS

SCTA is committed to equitable transportation planning. To avert underinvestment in disadvantaged communities, SCTA identified targeted areas for prioritizing funding to provide safe, accessible, and affordable mobility. This plan serves also as an update to the Community Based Transportation Plans.

Using census data, it is possible to identify concentrations of people with demographic traits such as income, race, or level of education completed, that help determine approximately where people who have been systematically disadvantaged may live and where to focus needed resources.

Between 2006 and 2009 SCTA studied four Equity Priority Communities (formerly called Communities of Concern) that had been identified by MTC.[1] They include Roseland, in Santa Rosa, the Springs area in Sonoma Valley near Sonoma, the River Area, along the Russian River and Healdsburg along Highway 101. Each of these areas is unique, with differing characteristics and challenges. SCTA staff went to these areas to meet people in libraries and community centers, on street corners and in front of grocery stores to find out how they used the transportation system and to talk to people about what still needed to be done.

The resulting documents are the SCTA Community Based Transportation Plans (CBTP).[2] Many funding programs prioritize communities of concern and these neighborhoods have

1 For reference these geographic areas were designated as Communities of Concern by MTC. The term Equity Priority Communities is now used.
2 SCTA Community-Based Transportation Plan, https://scta.ca.gov/library-archive/

benefitted from their COC designation. Four plans were completed in Sonoma County:

- Roseland (southwestern Santa Rosa), 2007[3]
- Lower Russian River (Guerneville and Monte Rio), 2009[4]
- Healdsburg, 2009[5]
- The Springs (Central Sonoma Valley), 2010[6]

Each CBTP brought local residents, community organizations and transportation agencies closer together to identify low-income neighborhoods' most important transportation challenges and develop strategies to overcome them. Each plan contains the following elements:

- Demographic analysis of the area
- List of community-prioritized transportation gaps and barriers
- Strategies or solutions to address these gaps
- Identification of possible funding sources
- List of stakeholders to implement the plan
- Documented results of community outreach strategies

There are programs developed by the State and others which use different terminology to identify communities who have been historically underserved. Understanding where people in need are clustered, geographically, makes it easier to concentrate resources and address infrastructure deficiencies, such as poor access to transit, dangerous or non-existent sidewalks. However, people in need may not be clustered together geographically. For example, affordable housing is dispersed throughout Sonoma County and disadvantaged households may be located next to affluent areas making them difficult to identify geographically.

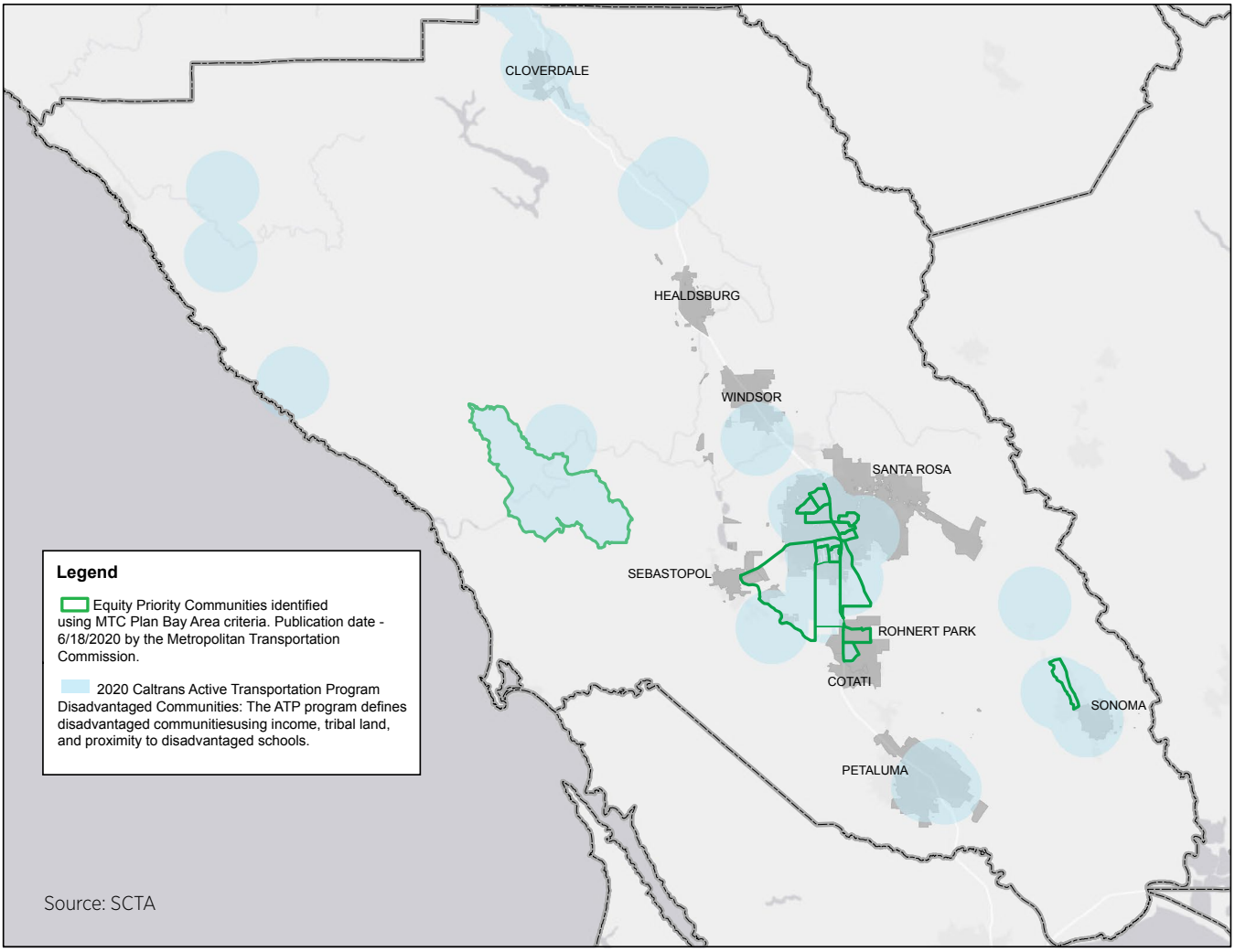
This has led us to a more flexible approach that includes:

1) Fine-tune the technical analysis to get a better understanding of geographic spaces that serve disadvantaged communities.

2) Develop an approach to address the whole population of disadvantaged people through policies and programs. Target outreach to those communities.

3 Roseland CBTP: https://scta.ca.gov/reports/Roseland_Community_Based_Trasnportation_Plan_-_Roseland_Report_Summary.pdf
4 Lower Russian River CBTP: https://scta.ca.gov/reports/Lower_Russian_River_Community_Based_Transportation_Plan.pdf
5 Healdsburg CBTP: https://scta.ca.gov/reports/Healdsburg_Community_Based_Transportation_Plan.pdf
6 The Springs CBTP: https://scta.ca.gov/reports/The_Springs_Community_Based_Transportation_Plan_06-03-2010.pdf

FIGURE 1-1. SONOMA COUNTY EQUITY PRIORITY COMMUNITIES[7]



In recent years MTC has adjusted their analysis to address more dispersed populations that aligns better with local understanding. SCTA has also made it a priority to reach out to people who have been systematically disadvantaged.

The MTC Plan Bay Area 2050 project provides a more detailed account of the methodology currently used by MTC to identify Equity Priority Communities.[8]

7 https://scta.ca.gov/planning/comprehensive-transportation-plan/sonoma-disadvantaged-communities/
8 MTC Plan Bay Area 2050 Equity Priority Communities, https://bayareametro.github.io/Spatial-Analysis-Mapping-Projects/Project-Documentation/Communities-of-Concern/

COMMUNITY VOICES

While interaction with the public is robust at regular SCTA meetings and events, the Outreach Plan developed for Moving Forward 2050 includes a variety of strategies to improve and expand outreach. In addition to community meetings at SCTA, and in libraries throughout the County, SCTA sought the input and ideas of people not inclined or able to go to a public meeting. Community Based Organizations were engaged to facilitate conversations about transportation needs within the groups they represent, who are systemically disadvantaged. These meetings were conducted at the CBO sites, as part of regular meetings, and in Spanish when appropriate.

These sessions highlighted the following:

- These communities were over three times as likely to say that costs to use the transportation system were too high.
- They were more likely to say that the system needs better maintenance.
- They were more likely to show uncertainty about other options to get around.
- They were less likely to say that harming the environment was a top issue with the transportation system.

There were also differences in survey responses by geography:

- Southwest Santa Rosa and East Petaluma respondents prioritized maintaining roads to a much higher degree than other areas.
- Sebastopol and West County respondents prioritized improving roads to a much higher degree than other areas.
- Sonoma Valley respondents prioritized expanding bus service to a much higher degree than other areas.
- West Petaluma respondents prioritized expanding bicycle facilities to a much higher degree than other areas.

As the pandemic changed the way we work and interact with each other the outreach process did a quick pivot. Online connections that had already been part of the strategy, now became integral. When all meetings became accessible from home SCTA saw a sharp increase in participation. Since it is impossible to identify the socio-economic status of online participants SCTA will continue partnering with CBOs and other groups as needed.

For more details see Appendix A-1.1 Community Voices and Appendix A-1.2 Identified Transportation Needs.

IDENTIFYING PLAN GOALS AND OBJECTIVES

The CTP builds on the efforts of local elected officials and staff from the cities, town, and county government in Sonoma County. This update has been developed with the understanding that existing transportation funding is inadequate, that there is increasing pressure on the existing transportation system, and that transportation impacts on the environment, public health, and safety are growing.

Overall, the CTP is meant to refine the vision, goals, and objectives for improving mobility on Sonoma County's streets, highways, transit system, and bicycle/pedestrian facilities, as well as to reduce transportation related impacts. To that end, it provides policy guidance and identifies transportation improvements for

development over the next 25 years. SCTA staff has worked with our partners to determine if our efforts are successful in helping us reach our goals, by including an enhanced performance evaluation outlined in Chapter 4. Measuring progress in achieving goals will help identify actions that are helping improve the Sonoma County transportation system and improve mobility for county residents.

Moving Forward 2050 Goals

Vision 2050

Connecting people and places as we transition our transportation network to zero-emissions by 2050.

Our guiding principles are to improve **safety**, **equity**, and **quality of life**.

Our transportation system should be:

Goal 1 — Connected and Reliable

Deliver a seamless network that allows people to use a variety of transportation types easily, affordably and dependably.

- Provide a robust and well-coordinated local and regional transit system.
- Create a high quality bike and pedestrian network.
- Optimize roadway operations to allow efficient movement of people.
- Ensure effective transportation options for youth and older adults.
- Guide innovation to the transportation system.

Goal 2 — Safe and Well-Maintained

Provide safe and well maintained transportation infrastructure.

- Employ Vision Zero policies and strategies.
- Use maintenance dollars efficiently and effectively.
- Design infrastructure for all ages and abilities.
- Deploy innovative technologies and best practices.

Goal 3 — Community Oriented and Place-Based

Implement place-based transportation projects, tailored to urban, suburban, and rural communities that will improve local mobility.

- Target high-traffic areas with right sized solutions to improve access.
- Focus on strategies that support high density, walkable and transit oriented communities.
- Prioritize resilient infrastructure in areas at risk for flooding, fire and other environmental challenges.
- Employ Complete Street policies and strategies that support a diversity of uses.

Goal 4 — Zero-Emissions

Provide zero-emission transportation opportunities that meet diverse community needs, improve health and enhance quality of life.

- Prioritize transportation funding for zero-emissions strategies.

- Emphasize strategies that incentivize transit and shared mobility.
- Take bold steps to achieve a zero-emission transportation network.
- Support climate-friendly land use practices through ongoing coordination and alignment.
- Implement the Shift Sonoma County Low Carbon Transportation Plan.

A Look into the Future

Decisions and actions that are made today will impact future generations. The future is never certain, but SCTA is able to leverage tools and data to provide insights on how our county may look in the next 5, 10, 20, or even 25 years. Land use and transportation models use historical growth and travel data to predict future growth, travel demand, and traffic.

SCTA can use these tools to anticipate the future, and to gain insights into how SCTA can focus its efforts to make progress on plan goals and objectives. These tools are updated regularly and supplemented by emerging data and information on current conditions and trends. This ensures that data and analysis continue to be useful and relevant for supporting SCTA's planning and project delivery activities.

Measuring Success

The CTP is evaluated, for the most part, by analyzing the list of transportation projects prioritized and submitted by each city and the County. Maintaining and improving our transportation infrastructure, including enhancing the transit system and non-motorized transportation network, has a positive impact on several of the goals. Additional transportation policies, technologies, and behavior changes must be implemented in order to continue to make progress in achieving all of the plan goals. These strategies have been identified and evaluated in local and regional planning documents and are summarized in the CTP Strategies Matrix. See Chapter 4 and Appendix 4.4 — Strategies Matrix for more details.

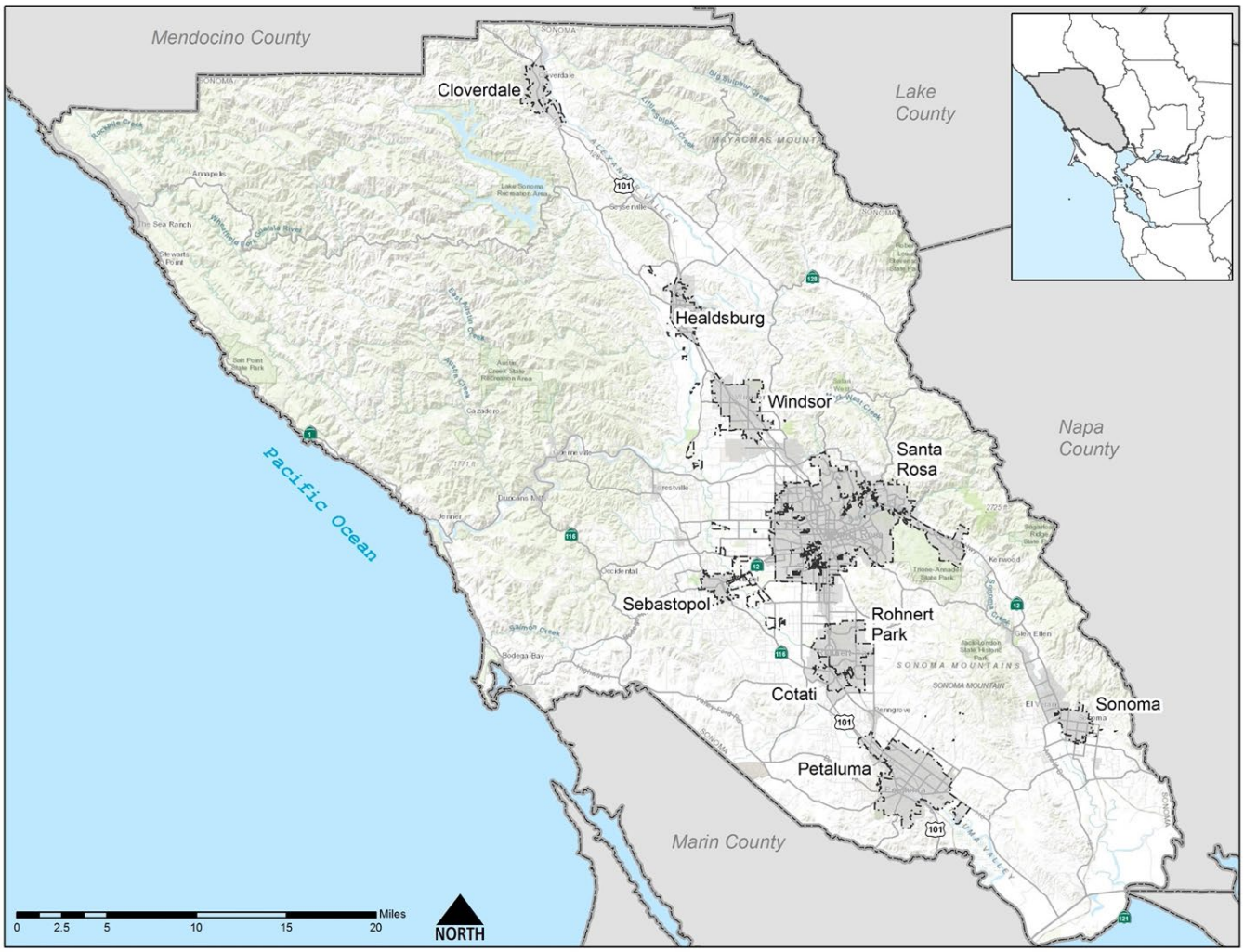
2.

OUR COMMUNITY

SONOMA COUNTY TODAY

Sonoma County spans an area from the San Pablo Bay to the Pacific Ocean, with mountain ranges along the northern and the eastern areas. The Coastal Range to the west parallels the Sonoma and Mayacama Mountains on the eastern side of the County.

Between the mountains is the Santa Rosa Plain that extends west of Santa Rosa, north of Cotati, south of Windsor and is bordered by the Laguna de Santa Rosa and Sebastopol on its western side. It is 20 miles long and six miles wide and is home to half of the County's population. It is also home to a number of protected species of wildlife.



Population settlement patterns and the transportation system were developed around these geographic constraints. There are nine incorporated cities and town in the county of which seven are located along the main north-south Highway 101/SMART corridor. Populated areas outside this corridor are in and around the Cities of Sebastopol and Sonoma, the Russian River area, the Sonoma Valley, and along the Pacific Coast. There are also other, smaller unincorporated communities throughout the county.

Approximately 500,000 people live in Sonoma County. More than half of the population reside in cities along the Highway 101 corridor, where of the government facilities, major health services, and shopping

centers are also located. Development in the unincorporated areas is far more dispersed and is spread throughout a very large geographic area.

Land Uses

Being the largest county geographically in the San Francisco Bay Area, Sonoma County has a diverse cross section of landscapes and development types and encompasses over one million acres of land. Approximately 14 percent of the land is devoted to residential uses, three percent are used for commercial, industrial, and similar uses, with the remainder of over 80 percent of the landmass consisting mostly of agricultural land and open space.

Sonoma County is known globally for its wines, and the County's economy reflects that. Agriculture and wine production have dominated the economy, along with other agricultural products for many years. In addition to agriculture there are local jobs in manufacturing, retail, tourism and healthcare. Sonoma County also has a high concentration of small businesses with just over half of the established business employing four or fewer people. Expand the category to nine or fewer employees and nearly three-quarters of all businesses in Sonoma County are regarded as small businesses.

Household Transportation and Housing Costs

SCTA supports polices that help make varied transportation choices available and affordable for all households and county residents. The transportation system allows people to access employment, goods and services, recreational opportunities, education, and other destinations. As transportation costs rise, accessibility and quality of life suffer as larger and larger portions of household budgets are devoted to transportation. In 2018, 10 percent of Sonoma County residents lived below the poverty line according to the Economic Development Board. While poverty is evident in the cities, there are many people living in poverty in the rural and semi-rural unincorporated areas, such as along the Russian River or in the Springs area of the Sonoma Valley.

Low and moderate income households are hit the hardest by high transportation costs. Current household travel costs are estimated at about $1,300–1,400 per month (2019). An average household in Sonoma County with the median household income of $81,018 spent over 20 percent of its household budget on transportation in 2019.

Rising transportation costs continue to impact household incomes and affordability in Sonoma County. The Center for Neighborhood Technology (CNT) estimates that housing and transportation are already unaffordable for many Sonoma County households. In 2015, CNT estimated that transportation and housing costs accounted for over 50 percent of household incomes in our county. Housing costs are especially high for households making less than median household incomes with almost half of households spending over 30 percent of their household budget on housing. Reducing household transportation and housing costs will increase countywide affordability and improve quality of life in Sonoma County.

The American Automobile Association (AAA) estimates that the cost of driving has increased by 23 percent since 2014 from an average cost of operating a personal vehicle of 62 cents per mile in 2014 to 76 cents per mile in 2019. During this

In 2020, SCTA released the Sonoma County Travel Behavior Study https://scta.ca.gov/wp-content/uploads/2020/02/Sonoma_TBS_2-7-2020_web.pdf, a comprehensive analysis and presentation of travel in Sonoma County. The study utilized traffic counts and mobile device data to quantify vehicle trips associated with residents, employees, and visitors, where trips start and end, the purpose and length of those trips, the times of travel, and the demographics of the travelers. The study summarizes seasonal and post-wildfire event travel conditions in addition to analyzing weekday and weekend travel. This study was conducted using 2017 data primarily and represents pre-pandemic conditions.

five year period, median incomes in the county have only increased by 10 percent. Increases to transportation costs are outpacing increases to household incomes and will continue to put pressure on Sonoma County households if this trend continues. Low-income households will be hit hardest as transportation costs increase and incomes grow slowly or flatten out.

Fires and other natural disasters

In October 2017, the Tubbs and Nuns fires ignited and were, at the time, the most destructive wildfires on record in the State of California, killing 22 people and destroying over 5,600 structures, many of them homes in urban neighborhoods in Santa Rosa and surrounding built up areas. This housing loss was devastating considering that the county was already struggling to meet the demand for housing. There were more fires in the County in 2019 and 2020 that destroyed homes and caused detrimental economic impacts.

In addition to the fires, Sonoma County has also been affected by the COVID pandemic. As of August 23, 2021 Sonoma County lost 344 people to the coronavirus. Many businesses have closed or will close before the pandemic is over and local governments are challenged as to how best plan for a post-pandemic world.

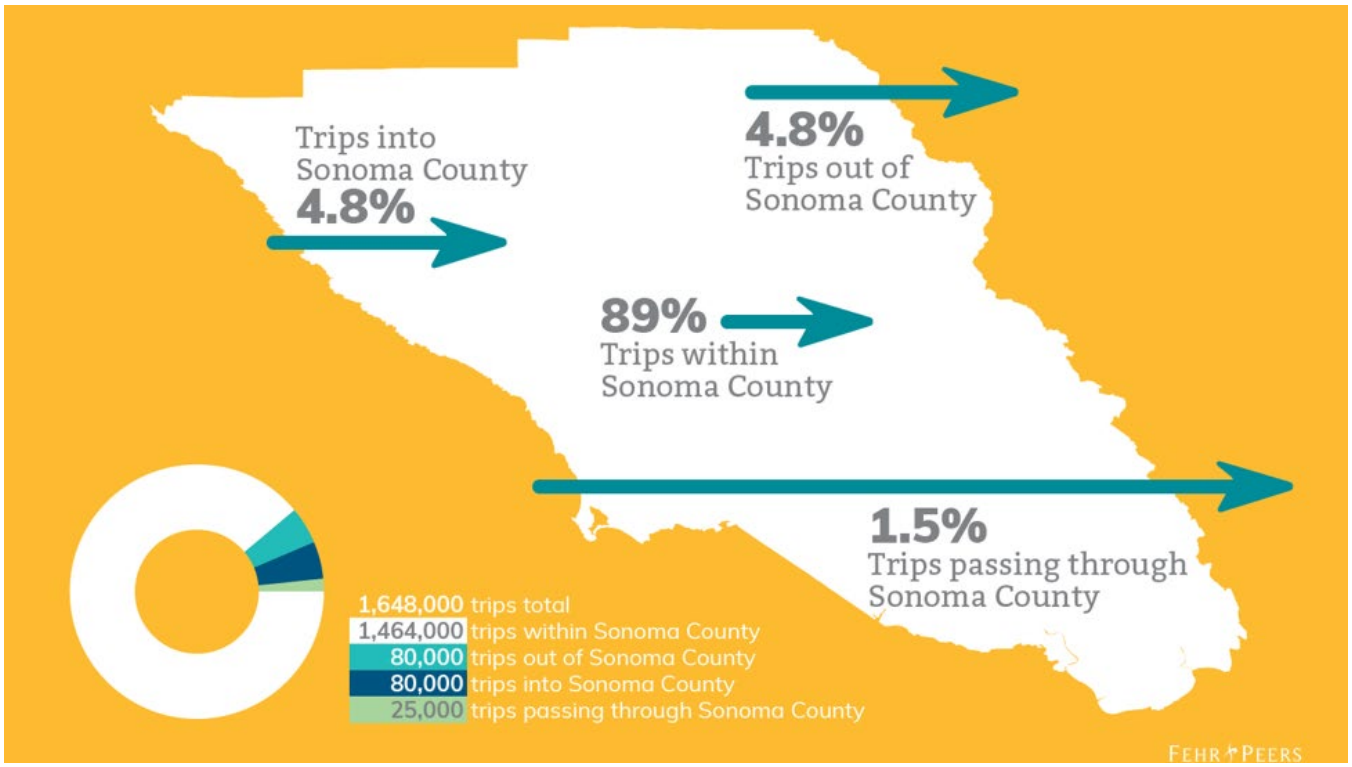
The multiple years of destructive wildfires coupled with the unprecedented impacts of the pandemic show signs of disrupting trends including population growth.

EXISTING TRAVEL CHARACTERISTICS

The U.S. Census Bureau and local and regional transportation planning agencies collect survey data and run travel demand models in order to determine where people are going, how they get there, and how they travel. This information is used to assess and prioritize future transportation improvements in order to maximize the utility of the transportation system.

In the Sonoma County Travel Model, travel is often summarized by trip which represents an individual's travel from one location to another. Trips are normally categorized by trip purpose, or reason the trip was taken. Trips are first calculated as person-trips (i.e. two people driving together to work would be one vehicle trip, but counted as two person-trips) and are then converted to vehicle trips using vehicle occupancy rates. Vehicle occupancies are important, because they demonstrate how many vehicles are needed to move a given number of people from location to location. Segmenting trips by trip purpose and vehicle/person trip helps provide information on what types of transportation improvements could provide the largest benefits to Sonoma County travelers. See Appendix A-2 for information on the Sonoma County Travel Model.

FIGURE 2-1. AVERAGE WEEKDAY TRAVEL FLOWS — SONOMA COUNTY 2017



Source: Sonoma County Travel Behavior Study

TABLE 2-1. TRIP PURPOSE CHART

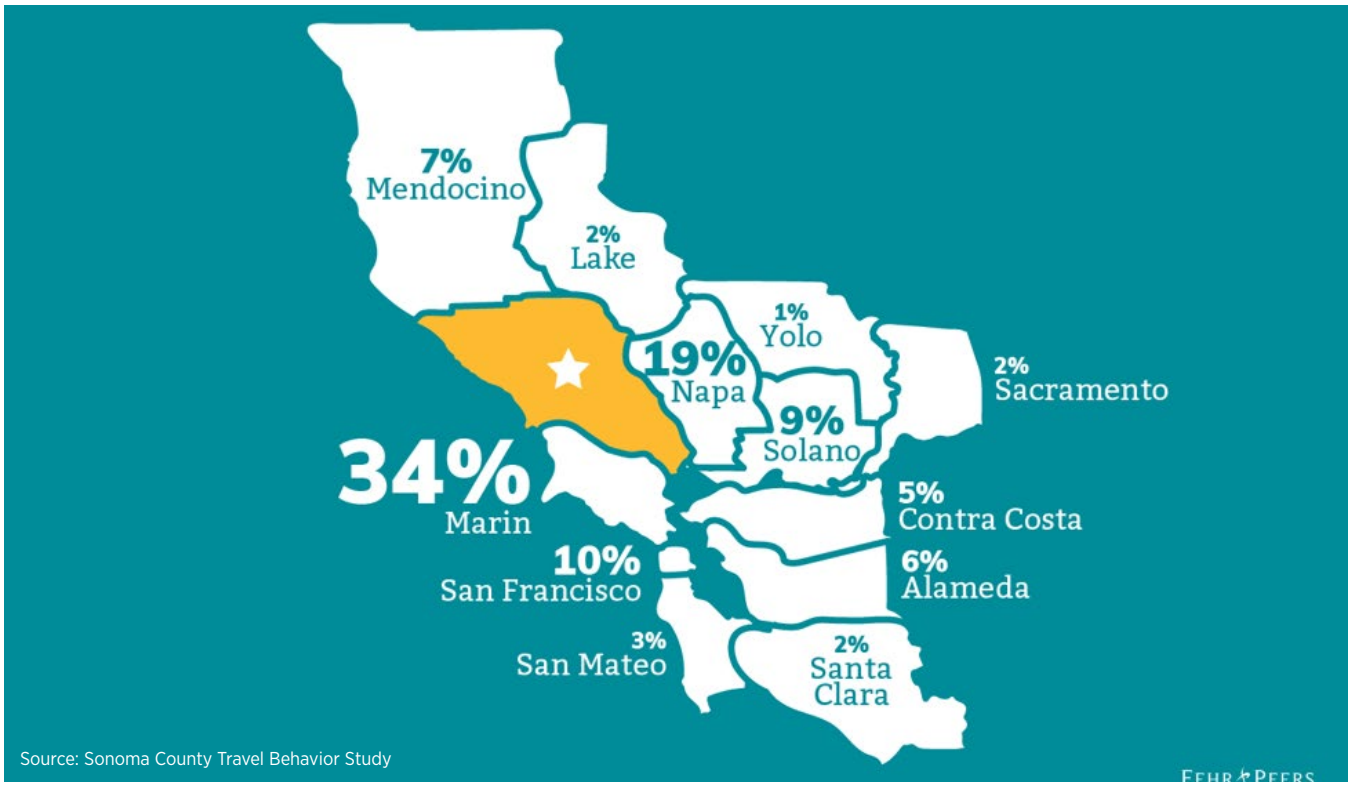
Trip Purpose	Average Travel Time: Minutes	Average Trip Length: Miles	Average Vehicle Occupancy: Persons/ Vehicle
Home — Work (15.1%)	22.13	13.83	1.19
Home — School (10.9%)	10.82	5.67	2.68*
Home — Other (42%)	13.29	7.13	1.74
Non-Home Based (32%)	11.03	5.87	1.47

*Includes auto and school bus passengers.
Estimates for 2015 extracted from the Sonoma County Travel Model

Where Are People Going?

Sonoma County travel is largely self-contained, with 89 percent of trips starting and ending in the county. Roughly 5 percent of daily trips enter or exit the county and 1.5 percent of trips pass through the county entirely. The majority of pass-through trips occur in the Highway 37 corridor in the southeastern corner of the county with trips travelling to and from Marin, Napa, and Solano counties making up most of this pass-through travel. External travel largely stays in the region, with 34 percent of intercountry trips going to or coming from Marin County. Other significant out of county travel flows include travel to and from Napa, San Francisco, Solano, and Mendocino counties (See Figure 2-2).

FIGURE 2-2. INTER-COUNTY TRIPS, AVERAGE WEEKDAY — SONOMA COUNTY 2017



Roughly 44 percent of total Sonoma County vehicle trips start and end within the City of Santa Rosa on an average weekday with other incorporated areas such as Petaluma, Rohnert Park, and Windsor generating or attracting significant portions of total daily travel. Major commercial and employment concentrations such as the Santa Rosa Market Place commercial district, Downtown Petaluma, commercial areas off of Rohnert Park Expressway in the City of Rohnert Park, and Santa Rosa Junior College are focal points for travel in the county and attract or generate significant numbers of trips each day.[1]

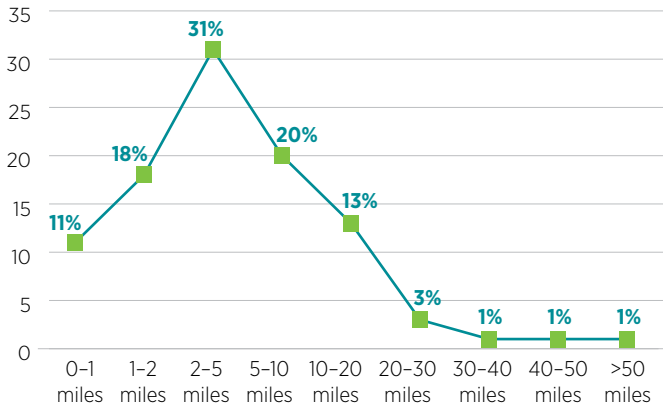
Most trips in the county are local and are relatively short. Roughly 29 percent of average weekday Sonoma County vehicle trips are less than 2 miles in length, 60 percent are less than 5 miles in length, and only 6 percent are more than 20 miles in length (see Figure 2-3). When averaged across all trip types and lengths, the average weekday trip length in Sonoma County is 6.9 miles long. Trips are generally longer on the weekend and in the morning commute period with average trip length increasing to 7.3 miles on the weekend, and 7.7 miles in the morning commute period as shown in Figure 2-4.[2]

Trip lengths also vary based on trip purpose and travel mode. Work trips are longer (13.83 miles) on average with school and shopping and other trips generally shorter (5-7 miles on average).

1 Sonoma County Travel Behavior Study
2 Sonoma County Travel Behavior Study

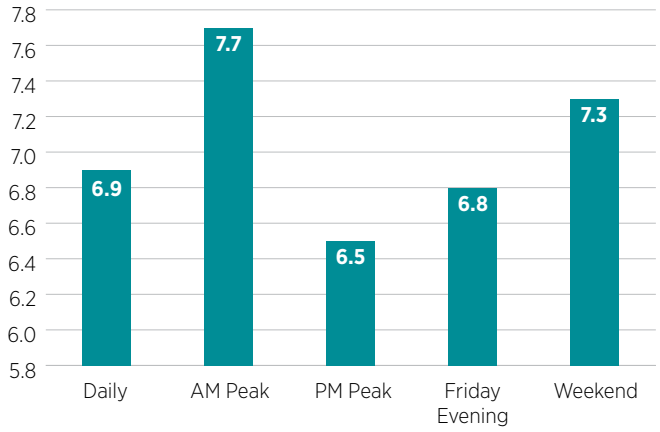
Visitor based trips are generally long with trip lengths varying between 20-30 miles on average. Auto based trips are generally the longest (8 miles per trip), with Transit (5 miles per trip), bike trips (5 miles per trip), and walk trips (1-2 miles) generally being shorter. [3]

FIGURE 2-3. AVERAGE WEEKDAY TRIP LENGTH DISTRIBUTION — SONOMA COUNTY 2017



Source: Sonoma County Travel Behavior Study

FIGURE 2-4. AVERAGE TRIP LENGTH (MILES) BY TIME PERIOD — SONOMA COUNTY 2017



Source: Sonoma County Travel Behavior Study

How Are People Getting Around?

Travel in Sonoma County, like the rest of the Bay Area and United States, is heavily oriented towards private passenger vehicles. In 2020 there were 361,821 licensed drivers and 541,806 registered vehicles in the county according to DMV records. Commute trips are concentrated during peak, or rush hour, travel periods and are major contributors to traffic congestion. In 2018 nearly seventy-seven percent of workers drove alone during their commute; 9.7 percent carpooled; 2.1 percent used public transit; 3.9 percent bicycled or walked; and 7.2 percent worked at home. These mode shares have been fairly stable since 1980, although the transit and carpool mode shares have dropped slightly, and more people are working from home.

TABLE 2-2. TRAVEL TO WORK MODE SHARE IN SONOMA COUNTY

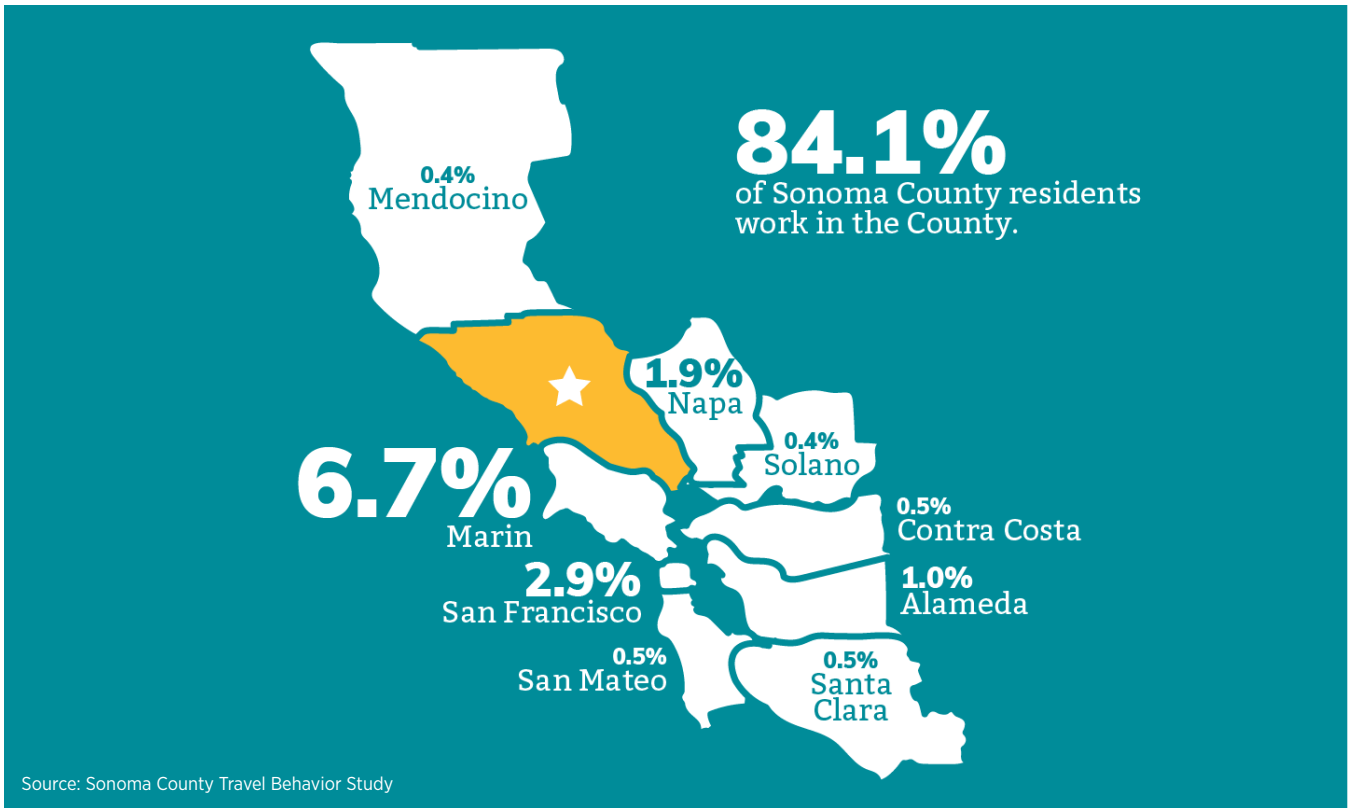
Travel to work	1980	1990	2000	2010	2018
Drive Alone	69.4	74.6	74.7	74.4	77.1
Carpool	16.3	13	12.6	11.3	9.7
Transit	3.2	2.3	2.4	2.0	2.1
Bike/Walk/Other	7.7	5.2	4.9	4.9	4.1
Worked at home	3.4	4.9	5.4	7.1	7.2

Source: US Census Bureau

Non-work travel in Sonoma County, like work travel, is auto oriented, but travelers are more likely to travel together, or share rides for school, recreation, shopping, and other trips. Almost half of trips in the county are made with two or more people (47 percent of all daily trips), roughly 8 percent of all trips are walk or bike trips, 44 percent are drive alone automobile trips, and under 1 percent are made using transit. A higher proportion of school

3 Sonoma County Travel Model

FIGURE 2-5. COMMUTE DESTINATION FOR SONOMA COUNTY RESIDENTS.



trips are shared ride or walk/bike trips (70% shared ride, 14% walk/bike).[4]

TABLE 2-3. TOTAL TRAVEL MODE SHARE IN SONOMA COUNTY

Total travel	2015
Drive Alone	44.31
Shared Ride	47.13
Transit	0.39
Walk/Bike	8.15

Source: Sonoma County Travel Model

Motor vehicle ownership in Sonoma County

Motor vehicle ownership in the County tends to be somewhat higher than the Bay Area average. There are also fewer households without access to a private vehicle in Sonoma County compared to the State of California (4.9 percent vs. 7.2 percent); and more households with two or more vehicles (65 percent vs. 62 percent).[5] The higher auto ownership rates reflect the County's dependency on personal vehicles for transportation as a result of dispersed land uses, an extensive road network, and the rural nature of much of the county.

4 Sonoma County Travel Model
5 U.S. Census Bureau: 2018 American Community Survey 5-Year Estimates.

TABLE 2-4. FEE PAID REGISTERED VEHICLES IN SONOMA COUNTY

Year	Registered Vehicles	Population	Vehicles per person
1950	51,582	103,405	.5
1980	240,204	299,681	.8
2007	428,000	484,470	.9
2014	456,249	500,292	.9
2020	537,434	496,947	1.1

Source: Department of Motor Vehicles, US Census

Roughly 21 percent of all Sonoma County weekday trips are for commute purposes.[6] Although modest in number, commute trips have a disproportionate impact on the transportation system's performance for several reasons. Commute trips are usually longer than other trips. They tend to be concentrated in a few hours of the day (7-9 AM and 4-6 PM); and vehicle occupancies are generally much lower for trips to work.

There were approximately 320,000 vehicle trips in Sonoma County in the AM Peak period, accounting for roughly 19 percent of total daily vehicle trips. The PM peak is slightly larger than the AM peak accounting for roughly 29 percent of daily vehicle trips, or 484,000 daily vehicle trips.

Trips to School

Though the number of homes with school aged children has declined, the morning traffic caused by the school commute is significant. Historically, children walked or biked to school, or rode a school bus. This is no longer true, with a large proportion of students being driven to and from school. Though there are movements to make walking and biking to school more attractive to children and parents, including the Safe Routes to School program overseen by SCTA and run by the Sonoma County Bicycle Coalition.

TABLE 2-5. 2015 SONOMA COUNTY SCHOOL TRIPS — MODE OF TRAVEL

Travel Mode	Percentage
Drive Alone	15.16
Shared Ride	70.12
Transit	0.66
Walk/Bike	14.04

Source: Sonoma County Travel Model

Non-Commute Trips

Other travel, including trips to medical appointments, shopping, and recreation and tourism trips make up the largest proportion of total daily trips (around 42 percent) but are less consistent than trips that are part of daily routines and are more difficult to analyze. Data available for these types of trips suggests that they are shorter than work trips and travelers are more likely to travel with other people in their vehicles.

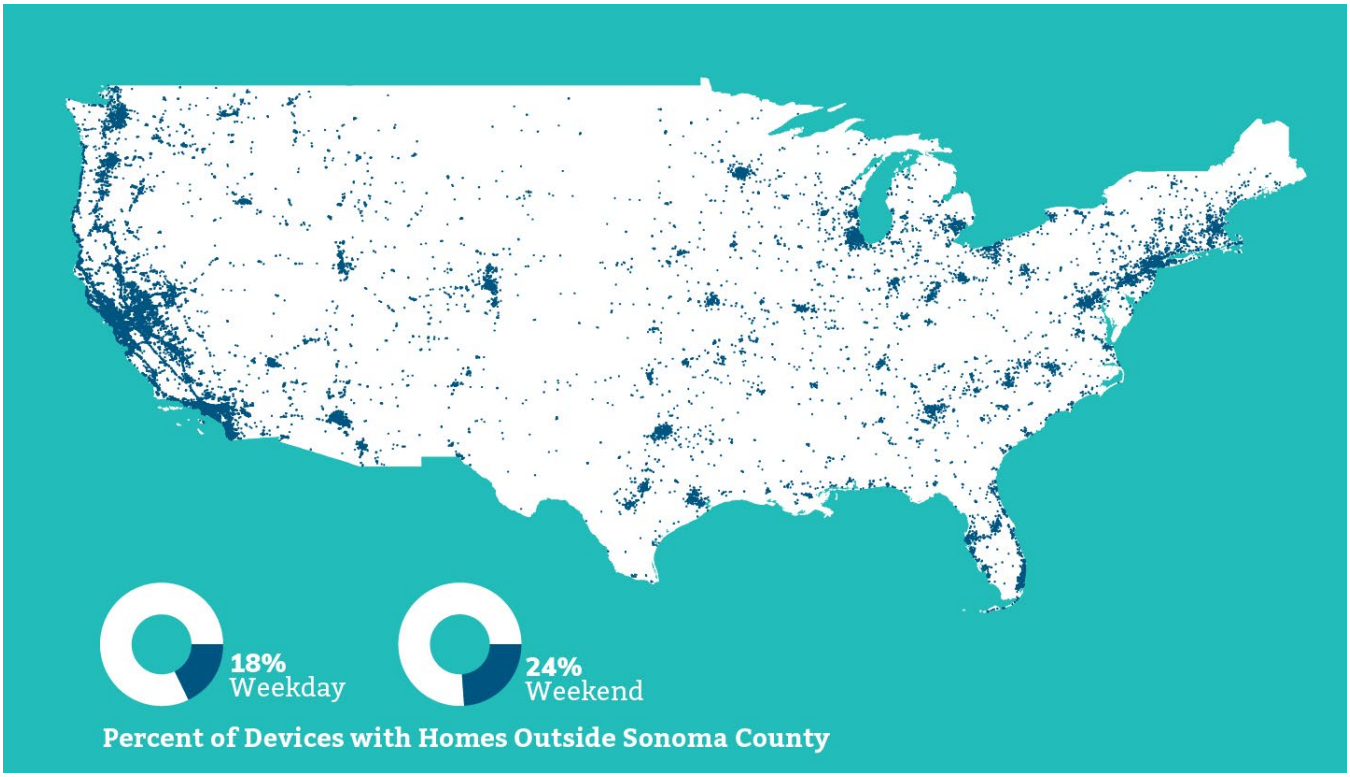
Visitor Travel

Analysis conducted as part of the Sonoma County Travel Behavior Study indicated that on an average weekday 18 percent of person trips were from home locations outside of Sonoma County. This proportion increases to 24 percent on an average weekend. Roughly 92,000 or 6 percent of weekday trips are estimated as being social recreation trips, or tourism-based trips.

Analysis of mobile device data indicated that roughly 90 percent of visitor trips were made from destinations within 100 miles of Sonoma

6 Sonoma County Travel Behavior Study.

FIGURE 2-6. HOME LOCATIONS OF VISITORS TO SONOMA COUNTY, SPRING 2017



Source: Sonoma County Travel Behavior Study

County. This indicates that though many visitors come to the county from diverse and distant locations (see Figure 2.7 Home Location of Visitors) a majority of visitor travel is coming from the San Francisco Bay Area region or is part of a larger visitor tour that starts or ends in other parts of the region.

As shown in Table 2-6, roughly 40 percent of Sonoma County visitors are from the San Francisco-Oakland-Fremont area on an average weekend day with 65 percent of weekend visitors traveling into the county from the region or neighboring counties. The top ten metropolitan areas with estimated visitor travel to the county are all located in California, with the majority in Northern California. Visitor travel on average weekdays is mostly consistent with observed and estimated weekend conditions with a slight shift to travelers from closer locations.

TABLE 2-6. METRO AREAS WITH VISITORS TO SONOMA COUNTY

Average Weekend Day		Average Weekday	
San Francisco-Oakland-Fremont, CA	40%	San Francisco-Oakland-Fremont, CA	31%
Sacramento, CA	8%	Vallejo-Fairfield, CA	11%
Napa, CA	7%	Napa, CA	11%
Vallejo-Fairfield, CA	7%	Sacramento, CA	8%
Ukiah, CA	5%	Ukiah, CA	6%
San Jose-Sunnyvale-Santa Clara, CA	4%	Clearlake, CA	4%

Average Weekend Day		Average Weekday	
Los Angeles-Long Beach-Santa Ana, CA	3%	Los Angeles-Long Beach-Santa Ana, CA	2%
Clearlake, CA	2%	San Jose-Sunnyvale-Santa Clara, CA	2%
Modesto, CA	1%	Modesto, CA	2%
Eureka-Arcata-Fortuna, CA	1%	Stockton, CA	2%

Source: Sonoma County Travel Behavior Study

SONOMA COUNTY IN THE FUTURE, FORECASTS

A number of different resources are available to help determine how Sonoma County will grow over time. The Metropolitan Transportation Commission and Association of Bay Area Governments (MTC/ABAG) provide forecasts of population, housing, and employment which they develop as part of the regional planning process. The California Department of Finance and Economic Development Department provide additional estimates of future population, housing, and employment growth. Local agencies guide growth and development in their jurisdictions through general plans and area specific plans. Local planners also track pending and permitted projects and development. Information on pending development and what is envisioned in general and other plans can be used to estimate build-out conditions or growth potential for our communities.

Forecasts are estimates of how Sonoma County will grow and develop into the future. This can help guide decisions about how the transportation system can be maintained and improved, and how these decisions can help meet county-wide transportation goals. Forecasts are developed using recent planning, economic, and transportation data, including local general plans, more detailed area specific plans, economic trend analysis, and transportation system usage data such as traffic counts, transit ridership, and traveler surveys.

The most recent forecasts produced at the regional level have been developed for the San Francisco Bay Area Regional Transportation Plan, "Plan Bay Area" and are forecasted through 2050[7]. Sonoma County households are predicted to grow from 189,000 households in 2019 to 220,000 in 2050. Employment growth is predicted to increase from 177,000 in 2019 to 251,000 in 2050.[8]

FIGURE 2-7. SONOMA COUNTY GROWTH FORECASTS: 2019 — GENERAL PLAN BUILDOUT: POPULATION, HOUSING UNITS, EMPLOYMENT

Source: US Census, Sonoma County Travel Model

7 While this CTP and the forecasting work cited here indicates growth in the long term it is interesting to note that the population of California declined by 182,084 (a negative growth rate of -0.46%) in 2020. For more information see www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/documents/E-1_2021PressRelease.pdf

8 2019 estimates from the US Census American Community Survey. 2050 forecasts generated by MTC/ABAG for Plan Bay Area 2050 as outlined in the December 2020 Final Blueprint Compendium.

Growth Potential in Sonoma County

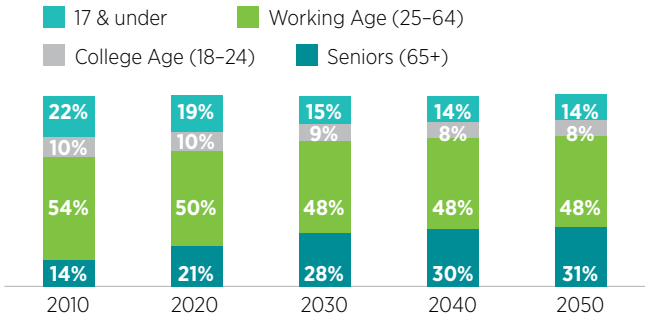
Future housing and other development potential is guided by local general plans. SCTA works with local planners to develop and maintain estimates of future general plan buildout (GPBO). These estimates consider how much growth is allowed under local general plans, zoning codes, area specific plans, and other planning policies and considers available land and policies that govern growth and development in each jurisdiction. SCTA staff maintain a database of countywide pending development and permitted projects. This database is used to ensure that these short-term and pending projects are represented in future growth forecasts. GPBO summaries or estimates of future growth potential are discussed by topic below.

Projected Population Growth in Sonoma County

Sonoma County population is predicted to grow by 20-25 percent, from just under 500,000 residents in 2019 to over 600,000 people in 2050.[9] The population continues to age with the median age rising from 37.5 in 2000, to 39.9 in 2010, and to 41.7 in 2018.[10] The senior population (ages 65 and over) is projected to increase from almost 22 percent (2020) to over 31 percent of the total population by 2050.[11] Aging of the population could have significant impacts on housing needs, local employment trends, travel patterns, and demand for goods and services - especially those oriented toward the care and service of the senior population. Retirees will make up a larger proportion of the population, which will reduce the size of the local workforce, which could trigger a need to import more labor from surrounding counties to fill Sonoma County jobs. Senior travel patterns can also be quite different from the rest of the population. With no need to commute to work or drop children off at school, some travel could shift to off-peak periods, taking some pressure off of the busy and congested peak period travel times.

The Sonoma County population is projected to become more racially and ethnically diverse by 2050. Minority population share will increase by 2050 and is predicted to make up 49 percent of the total Sonoma County population.[12] Population growth of these ethnic groups is expected to impact housing preferences and household formation rates.

FIGURE 2-8. SONOMA COUNTY AGING POPULATION 2010–2050



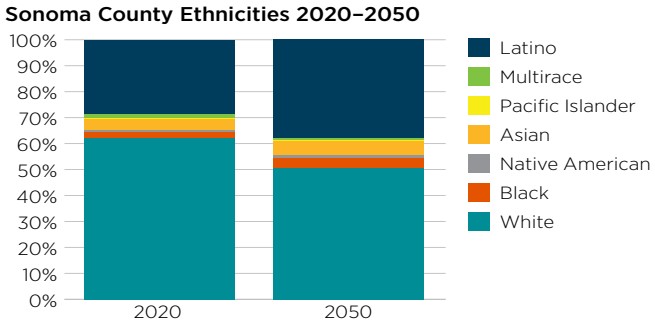
Source: California Department of Finance

9 US Census, Sonoma County Travel Model
10 US Census American Community Survey (2018, 5-year estimates)
11 California Department of Finance
12 California Department of Finance

FORECASTING AND MODELING UNCERTAINTY

Forecasting and modeling techniques provide valuable information about how populations may grow and change, how the economy will develop, and how population and employment growth may impact travel in the future. Modeling tools used by SCTA to analyze future conditions in the CTP have been validated using real world data such as roadway traffic counts, transit ridership data, bicycle and pedestrian counts, and population, housing, and employment growth data collected by the US Census Bureau and other government agencies. This validation process ensures that model results are reasonable and are consistent with actual travel conditions and observed growth trends. Though care is taken to ensure that forecasts and model results are accurate, they are not perfect and may not provide a complete or perfect picture of the future. Forecasts and model results are useful for long range planning and to support decision making, but should always be compared to historic trends, existing conditions, and other empirical research and the results should be used and applied with care.

FIGURE 2-9. SONOMA COUNTY ETHNICITIES 2020–2050



Source: California Department of Finance

Projected Housing Growth in Sonoma County

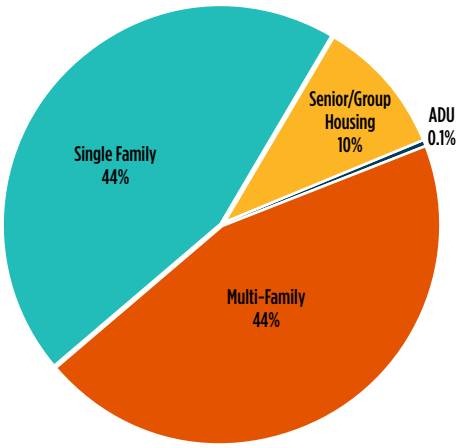
MTC/ABAG develops housing production forecasts based on household income and demand, historic housing production rates, state housing requirements and mandates, and local planning (general plans and zoning). Housing growth assumptions also account for changes in housing type preferences due to aging populations, changes in the ethnic makeup of populations, and housing markets and demand. Regional forecasts estimate a 17 percebt increase in households and housing through 2050, or an increase of 32,000 households during this time period.[13] General plan housing estimates may differ from market and trend based projections and represent potential housing as allowed by general plans and other local planning documents. Estimated general plan housing potential for all Sonoma County jurisdictions is roughly 52,000 housing units.[14] The majority of housing potential in the county is located in the larger jurisdictions (Santa Rosa, Petaluma, and Rohnert Park) and unincorporated areas. Housing potential in unincorporated areas is located in urban service areas or within areas that are slated for future annexation.

Short term housing potential, or housing that could be constructed in the near future, can be estimated by looking at projects in the development pipeline, or that are somewhere in the current permitting and development process. As of the fall of 2020, there were over 21,000 housing units in the development pipeline. There has been a recent shift towards multi-family and higher density housing construction in recent years, and pending housing development is split about equally between single family detached and multi-family housing units. About 10 percent of pending housing development is focused on senior/group housing and accessory dwelling

13 Plan Bay Area 2050 — Final Blueprint Compendium, December 2020.
14 Sonoma County Travel Model

units. The highest proportion of pending housing is located in the cities of Santa Rosa, Rohnert Park, and Petaluma, and the Town of Windsor, with a smaller proportion of pending units located in smaller jurisdictions and unincorporated areas. Almost half of these pending units have been approved or were under construction in 2019.[15]

FIGURE 2-10. SONOMA COUNTY DEVELOPMENT PIPELINE IN 2021 — HOUSING UNITS BY UNIT TYPE



Source: Sonoma County Permitted and Pending Development Database

Projected Employment Growth in Sonoma County

MTC/ABAG forecast future employment growth for the San Francisco Bay Area region. This analysis considers employment and job growth trends, national population and economic forecasts, housing supply, and characteristics of the work force (education, training, etc.). This forecast projects that 30,000 additional jobs may be added to the Sonoma County economy by 2050. Historically, the majority of job growth is projected to occur in the cities, urbanized areas, and business parks in the unincorporated areas. Job growth is expected to be heavily biased towards health, education, recreation, financial, and professional services sectors.

Sonoma County jurisdictions actively plan for employment and job growth through general plans and other local policy decisions. Potential employment growth envisioned by local general plans is generally higher than trend-based projections such as those produced by MTC/ABAG. Based on current general plans, there is potential for almost 100,000 additional jobs in Sonoma County.

Pending projects in the current development pipeline provide an indication of short-term potential for job growth and economic development. In 2020, there were over 300 job related projects in the development pipeline, representing over 7 million square feet of potential employment development across the county. Project types are diverse, ranging from visitor related uses and hotels, commercial projects, and industrial or office projects.

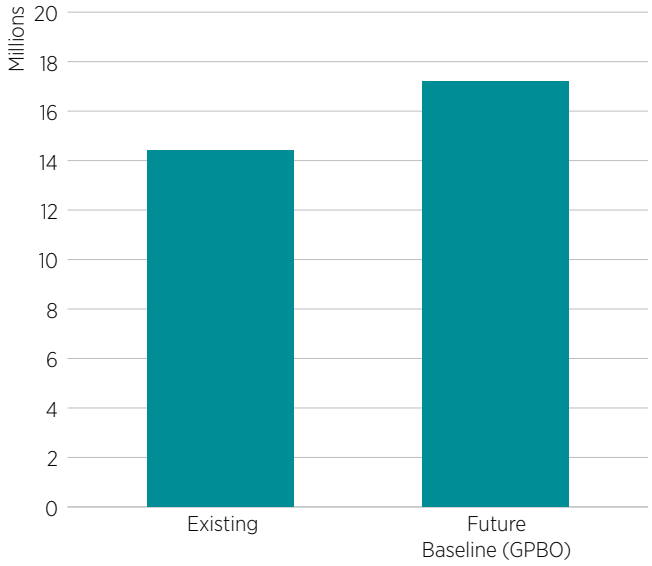
Travel

Vehicle miles traveled (VMT) is a commonly used measure of travel activity. VMT is a function of population, vehicle ownership, how often people travel, and where they are going. The Sonoma County Travel Model (SCTM) estimates a 20 percent increase in VMT from today into the future based on population and employment growth. This represents an increase from between 14-15 million VMT per day to 17 million VMT per day under general plan buildout conditions. VMT per capita is expected to go down (from 28.7 VMT/day per capita to 27.7 VMT/day per capita) as general plans are built out and

15 Sonoma County Permitted and Pending Development Database

jobs-housing balance improves over time. This is consistent with local jurisdiction's commitment to city centered growth and focusing growth within urban growth boundaries and priority development areas.

FIGURE 2-11. SONOMA COUNTY DAILY VMT EXISTING CONDITIONS — FUTURE BASELINE (GPBO)



Source: Sonoma County Travel Model

Travel Modes

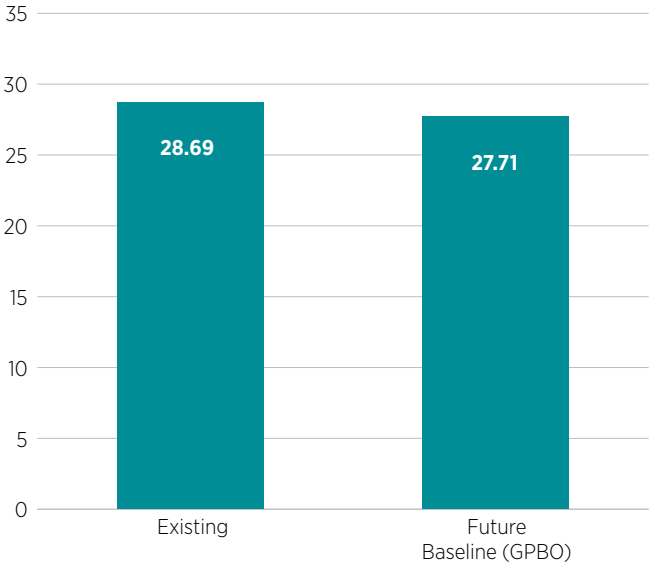
Travel in Sonoma County is dominated by the private automobile and is expected to remain so into the future if transportation policy, funding, and attitudes do not change. Currently approximately 8 percent of trips were made using active transportation modes. The Sonoma County Travel Model estimates that the rate of using active travel modes will stay in the 8 percent range in 2050, and estimates that major transportation projects and growth will have a very small impact on shifting travel to active transportation modes at the countywide level. Total transit ridership and walking/biking is expected to increase in the future but increased travel using these modes will most likely be offset by increased auto travel.

TABLE 2-7. SONOMA COUNTY MODE SHARES BY TRIP PURPOSE — 2050

	Auto			Non-Auto
	Drive Alone	Shared Ride	Transit	Walk/ Bike
All Trips	44.48%	47.13%	0.3%	8.6%
Commute	76.95%	16.8%	1.01%	5.2%
School	15.0%	70.9%	0.55%	13.6%

Source: Sonoma County Travel Model

FIGURE 2-12. SONOMA COUNTY DAILY VMT/ CAPITA EXISTING CONDITIONS — GPBO



Source: Sonoma County Travel Model

Emissions and Air Quality

Transportation accounts for around 60 percent of all countywide GHG emissions in Sonoma County. The SCTA and Sonoma County jurisdictions have committed to reducing GHG emissions in the future. Transportation GHG emissions are

calculated using estimates of total vehicle travel (VMT), travel speeds, and vehicle fleet characteristics. The State has mandated improved fuel economies for vehicles which will help reduce GHG emissions.

Congestion and Travel Delay

Traffic volumes and congestion continue to increase in Sonoma County. Increased traffic congestion can lead to lost productivity due to increased delay, increased fuel consumption and pollution, reduced accessibility, longer emergency response times, higher traffic collision rates, and impacts to quality of life.

A commonly used measure of congestion is Person Hours of Delay (PHD). PHD is calculated by determining the difference between estimated travel time under congested conditions and under free-flow or uncongested conditions for a roadway segment or trip. The travel model estimates that roughly 23,500 hours were lost each day because of traffic congestion in Sonoma County. Sonoma County congestion is predicted to increase to 36,000 hours lost each day due to congestion in the future. Most of this increase can be attributed to increased travel because of population and employment growth. About one-quarter of this delay is expected to occur during the morning and evening peak travel periods. Highways and major local arterials would be impacted the most by increased congestion.

3.

OUR TRANSPORTATION SYSTEM

The transportation system is made up of roads and bridges and bicycle lanes and sidewalks. It also includes the public transit systems, buses and SMART and, increasingly a variety of programs and new technology to make travel easier and more efficient.

Planning a transportation system that will meet the needs of Sonoma County residents in 2050 requires a careful look at the system today. This chapter is organized into sections about Roads & Highways, Bicycle & Pedestrian facilities, Public Transit, and Mode Shift strategies.

ROADS AND HIGHWAYS

The transportation system in Sonoma County is centered around a network of roads and highways on which people travel in cars, trucks, buses, on bikes, and on foot. They provide access to jobs, education, shopping and medical services and allow for the delivery of goods. The city streets, country roads, highways and freeway account for a massive investment made by each city, the County, and the State. Those jurisdictions are also responsible for maintenance, an ever growing and on-going cost.

There are over 2,600 miles of public roadway countywide, which is far greater than other counties in the region including those with a much higher population. Over half of the roadway mileage is in the unincorporated county.

The California State Department of Transportation (Caltrans) owns and maintains more than 230 centerline miles of highway, with more than three-quarters of it in the rural

portions of the county. The State highways are among the most heavily traveled routes (e.g., Highway 101), and because of this, carry over half of the daily traffic, measured in vehicle miles traveled (VMT), in Sonoma County.

TABLE 3-1. SONOMA COUNTY CENTERLINE MILEAGE OF PUBLIC ROADS, 2018

Jurisdiction	Miles	Percent	Daily Vehicle Miles Traveled	Percent
County of Sonoma	1,393	52%	2,937,220	23%
Cities	1,034	39%	3,093,410	25%
Cloverdale	34	1%	54,650	0%
Cotati	23	1%	83,800	1%
Healdsburg	47	2%	101,410	1%
Petaluma	190	7%	547,680	4%
Rohnert Park	86	3%	305,260	2%
Santa Rosa	505	19%	1,627,400	13%
Sebastopol	25	1%	47,380	0%
Sonoma	38	1%	110,570	1%
Windsor	87	3%	215,260	2%
State Highways	236	9%	6,512,940	52%
State Parks Department	4	0%	2,690	0%
Federal Agencies	2	0%	970	0%
Total Maintained Mileage	**2,670**	**100%**	**12,547,230**	**100%**

California Department of Transportation, Highway Performance Monitoring Program, https://dot.ca.gov/programs/research-innovation-system-information/highway-performance-monitoring-system

Note: Miles and percentages are rounded

On an average weekday, roughly 1,648,000 trips are taken in or through Sonoma County. Of these trips, 89 percent are intra-county, 11 percent are inter-county, and 1.5 percent pass through the County without stopping. The largest trip generators in Sonoma County are Rohnert Park West Side Commercial, Downtown Santa Rosa and Plaza Mall, City of Sonoma, Santa Rosa Airway Industrial Area, and Rohnert Park Expressway Commercial. (Sonoma County Travel Behavior Study, 2020).

The roadway and highway systems in Sonoma County are generally built out; however, projects that improve highway interchanges, roadway and highway safety, and that maintain the system are imperative to preserve existing investments and accommodate population growth. Sixty-five roadway improvement projects totaling nearly $2,914M and 16 highway improvement projects totaling $785M are identified in this plan for implementation through 2050.

Since Moving Forward 2040 (2016)

Highway 101

Highway 101 is the primary north-south connector between seven of Sonoma County's nine cities, Marin County and San Francisco to the south, and Mendocino County to the north. The SCTA has been working for more than two decades toward converting the partially rural freeway to a six-lane freeway with High Occupancy Vehicle (HOV) lanes. The first of seventeen project segments was completed in 2003. Construction of the final segment of HOV lanes in Sonoma County through central Petaluma is fully funded and underway with scheduled completion by the end of 2022. This project will complete continuous HOV lanes from the southern Sonoma County line to Windsor River Road.

TABLE 3-2. WEEKDAY ALL-DAY ORIGIN OF TRIPS TO LARGEST TRIP GENERATORS

	Rohnert Park West Side Commercial	Downtown Santa Rosa & Plaza Mall	Sonoma Central	Santa Rosa Airway Industrial Area	Rohnert Park EX Commercial
Sonoma	0%	0%	57%	0%	0%
Petaluma	9%	2%	1%	2%	7%
Cotati	4%	1%	0%	0%	8%
Rohnert Park	49%	6%	1%	4%	56%
Santa Rosa	24%	78%	3%	72%	17%
Windsor	1%	3%	0%	6%	1%
Healdsburg	0%	0%	0%	2%	0%
Cloverdale	0%	0%	0%	0%	0%
Sebastopol	1%	1%	0%	1%	1%
Other Areas	7%	6%	24%	10%	5%
Outside County	5%	2%	14%	4%	5%
Total Trips	**41,000**	**35,000**	**22,000**	**21,000**	**21,000**

KEY TAKEAWAYS

- Roughly 49 percent of Rohnert Park West Side Commercial trips originate in Rohnert Park and 24 percent originate in Santa Rosa
- Roughly 78 percent of Downtown Santa Rosa & Plaza Mall trips originate in Santa Rosa and 6 percent originate in Rohnert Park
- Roughly 57 percent of Sonoma Central trips originate in the City of Sonoma and 24 percent originate in unincorporated areas of Sonoma County
- Roughly 72 percent of Santa Rosa Airway Industrial Area trips originate in Santa Rosa and 10 percent originate in unincorporated areas of Sonoma County
- Roughly 56 percent of Rohnert Park EXPY Commercial trips originate in Rohnert Park and 17 percent originate in Santa Rosa

One segment of the four-lane highway remains in Marin County between Novato and just south of the Sonoma County line (See map: MSN B7). The major funding source to complete this segment is from Regional Measure 3, which is pending legal challenges. The Transportation Authority of Marin is actively seeking alternative funding sources to close the gap. Funding will continue to be sought to furnish landscaping along the entire corridor.

Many interchanges along the route are in need of updating and are identified in the plan:

- U.S. 101 and Railroad Avenue interchange in Cotati
- U.S. 101 and Todd Rodd interchange in Santa Rosa
- U.S. 101 at Hearn interchange in Santa Rosa
- U.S. 101 at Hearn Mendocino Ave/Hopper in Santa Rosa
- U.S. 101 at Shiloh

Ramp Metering

In 2014, Caltrans completed activation of ramp metering along the Highway 101 corridor with 43 onramp locations in Sonoma County from Pepper Road in Petaluma to Arata Lane in Windsor. Ramp metering lights manage the rate at which vehicles enter the freeway to optimize the operations and function of the system, resulting in reduced travel times.

FIGURE 3-1. MARIN SONOMA NARROWS (MSN)

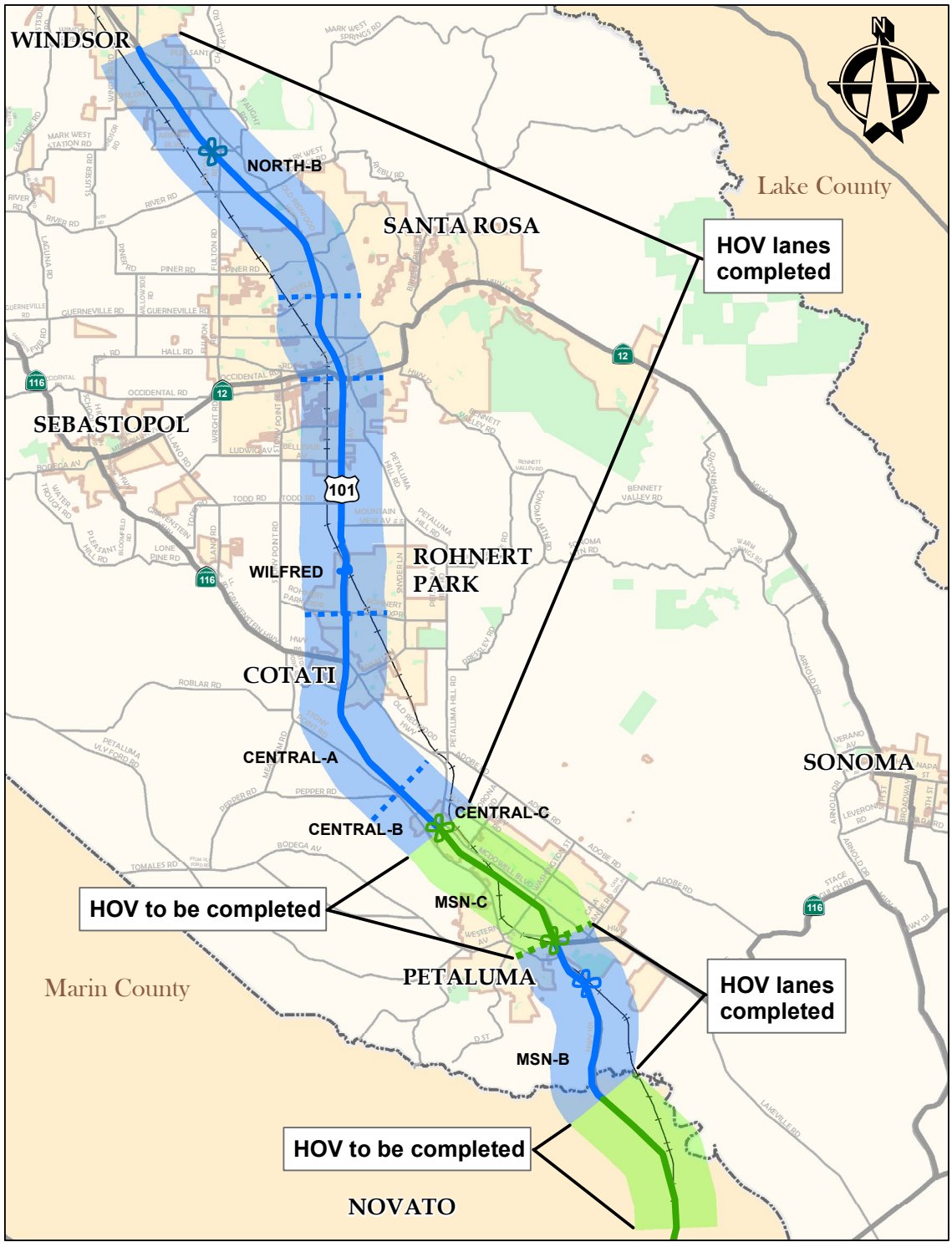


FIGURE 3.2. HIGHWAY 37

Highway 37

State Route 37 is a 21-mile corridor linking US 101 in Novato and Interstate 80 in Vallejo along the northern shore of the San Pablo Bay. As the primary regional east-west connection in the North Bay, SR 37 carried an annual average of 37,000 vehicles daily in 2018 (Sonoma County Travel Behavior Study, 2020) and is projected to increase to over 40,000 vehicles daily by 2050.[1] Due to the imbalance of affordable housing in the North Bay, the heavy commute from Solano County to Marin and Sonoma creates heavy congestion on SR 37 causing up to an 80-minute delay during peak commute times. Alternative routes are more than double the length in miles and have significant safety and capacity challenges.

This corridor is also under threat from sea level rise as it is one of the lowest-lying highways in California, in terms of elevation relative to mean high water. State Route 37 is currently being studied to understand how adaptive transportation planning could address issues related to climate change and sea level rise. The projected rising seas poses a threat to the Highway with partial inundation by 2050 and complete inundation by 2100. The berm upon which SR 37 sits passes through existing marshes and marshes under restoration, which poses a threat to adaptation of the surrounding coastal-marsh systems.

In 2015, the transportation agencies of Marin, Napa, Solano and Sonoma Counties formed a partnership through a Memorandum of Understanding (MOU) to develop an expedited funding, financing and project implementation strategy for the reconstruction of SR 37 to withstand rising seas and storm surges while improving mobility and safety along the route. This partnership led to formation of a Policy Committee of 12 elected officials that has guided numerous studies and plans on strategies including bus and rail transit feasibility, water transit, public access, transportation demand management, highway configuration to address

1 Sonoma County Travel Study 2018 volumes adjusted using growth factors from the Sonoma County Travel Model.

both congestion and sea level rise, funding sources, tolling legislation, environmental documents, and near- to long-term restoration and enhancement projects in the San Pablo Bay Lands.

Complete reconstruction of the corridor to alleviate sea level rise threats, environmental issues, and congestion is a long-term project that could take several years if not decades. Short-term projects have been identified, including flood protection solutions at Lakeville Highway and other targeted areas, a reversable carpool lane using a movable concrete barrier, and dynamic ridesharing marketing and incentive programs.

Highway 12

State Route 12 connects Sebastopol, Santa Rosa, the Sonoma Valley, and Napa County. It also provides a connection to the Interstate 80 corridor. Most of this corridor is two lanes, with the exception of a portion through Santa Rosa that has four lanes and is developed to freeway standards. The two-lane sections in Sebastopol and in the Sonoma Valley become severely congested during peak travel times throughout the year but is particularly impacted when tourism is at its height during summer months.

Issues and Opportunities

Vision for the Future

The vision for the future of highways and roadways in Sonoma County incorporates safe and well-maintained roadways, efficient use of infrastructure, and complete streets with safe access for multiple modes. This includes projects that improve pavement conditions, complete the HOV corridor on Highway 101, enhance intelligent transportation systems, construct safety and efficiency improvements at freeway interchanges and roadway intersections, and engineer multimodal corridor improvements such as transit pullouts, protected bike lanes and sidewalks.

Condition of Roads

As a county with a large ratio of road miles per capita, maintaining the existing infrastructure is a challenge. Extreme weather, fires, flooding, landslides all have pronounced negative effects on the infrastructure. Pavements deteriorate 40 percent in quality in the first 75 percent of their life; however, this deterioration subsequently accelerates rapidly, resulting in another 40 percent drop in quality in the next 12 percent of life.

A single dollar spent on renovation when the pavement is still in ‘fair’ condition can save five dollars in maintenance cost over spending maintenance funds when the pavement has already deteriorated to ‘very poor’ quality.

Road rehabilitation is a significant unmet need, that has been highlighted in every CTP and in annual road condition reports. Unlike other more

nuanced goals, maintaining the infrastructure "only" needs funding, but costs are estimated at over $1.5 billion over the next 30 years in order to maintain the existing conditions of roads. In order to reach and maintain a state of good repair on every street and road in Sonoma County, MTC estimates a cost of over $3 billion over the next 3 years.

Local Roads Projects

CTP local roads projects represent a diverse set of projects including:

- Southern Crossing at Caulfield Lane
- Northpoint Parkway Improvements — Bellevue Avenue to S. Wright Road
- Sebastopol Rd Corridor Plan — Dutton Ave to Stony Point Rd
- Petaluma Hill Rd — widen from Aston Ave to Santa Rosa City limit
- Bodega Corridor Project
- Old Redwood Highway: Windsor Road to Arata Lane
- Adobe Road Reconstruction

Bridges

There is a need to upgrade or replace bridges in Sonoma County that remains unfunded. Specific unfunded projects are the Rohnert Park Redwood Drive Bridge Replacement at Hinebaugh Creek ($10M) and the SMART Rail Russian River Bridge costing ($30M).

Trends

Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) uses systems of information and communications technologies in the transportation system to improve operations. ITS has been around for some time in the form of traffic signals activated by traffic, transit, and emergency vehicles. Arterial management is another form of ITS that includes all signals in a corridor and adapts to traffic conditions to optimize flow. Signal timing technology can also be used to detect vehicles in left turn lanes to trigger a left turn signal to avoid running the signal when no vehicles are traveling in that direction. Real-time signs displaying travel time estimates to popular designations from highways is another form of ITS.

Emerging ITS expands these technologies to automated driving systems and data exchanges to improve safety and efficiency. Sensors and transmitters can be deployed to manage smart roads, cars, streetlights, and parking systems. These systems can enable communication between vehicles and the transportation system.

Autonomous Vehicles

Automated vehicles have the potential to shift many aspects of transportation thanks to improvements in vehicle sensors, mapping and onboard processing. While these changes may gradually reduce the need for a driver, the introduction and adoption of autonomous vehicles is expected to be gradual due to the complexity of cost of these new systems.

The convenience of autonomous vehicles is expected to initially benefit more affluent users, while the wide availability of affordable mobility

through autonomous vehicles will require significant levels of adoption and reductions in costs. Any congestion reduction from autonomous vehicles may also require dedicated lanes that allow for platooning or the early retirement of non-autonomous vehicles.[2]

Autonomous vehicles also have the potential to increase VMT significantly due to shifts in mode choices and the additional trips without a passenger — which are already observed in ride-hailing services.

Because of these potential impacts, the 3 Revolutions Future Mobility Program at the UC Davis Institute of Transportation Studies suggests that policies such as occupancy requirements, performance standards and fee-based approaches could be required to ensure that the shift to autonomous vehicles also supports our future transportation goals.[3] MTC recommends the following strategies that could help mitigate negative impacts of automation[4]:

- Control greenfield development — AVs could induce more dispersed development and increase VMT by making longer travel times more tolerable. Policies should be in place to ensure that future growth is efficient.
- Repurpose off-street parking for infill development — AVs are very likely to reduce car

2 Victoria Transportation Policy Institute, Autonomous Vehicle Implementation Predictions, www.vtpi.org/avip.pdf
3 Capturing the Climate Benefits of Autonomous Vehicles, UC Davis https://3rev.sf.ucdavis.edu/sites/g/files/dgvnsk6431/files/files/page/av.pdf
4 Autonomous Vehicles Perspective Paper, MTC/ABAG, June 2018

ownership and parking demand, especially in more dense areas. Off-street parking should be reclaimed and converted to more efficient uses.

- Continue to invest in high capacity transit and introduce demand-responsive transit in less dense areas — AVs could make taking transit less attractive, but high capacity transit will still be more efficient in high traffic corridors. Transit could evolve in less dense areas to compete with AVs.
- Implement dynamic road and curb space/parking pricing — AVs could put new demands on the road network and curb areas. Programs could be implemented to mitigate any negative impacts.
- Equitable access should be required and protected — Without regulation, AV service providers could cluster service near busy, higher-income areas. Programs should be in place to provide equitable access.
- Cap speed limits in downtowns and neighborhoods — Reducing average vehicle speeds could increase safety for all road users, particularly non-motorized travelers.
- Mandate that all AVs are EVs — AVs could potentially increase total travel and VMT. Requiring that all AVs are EVs would reduce travel related emissions significantly.

Some changes in our transportation infrastructure may also be required. For example, future city streets may be able to support smaller roads or lanes along with lower parking demand due to autonomous vehicles. Highway and freeways could operate more efficiently due to vehicle platooning and reduced lane requirements. Vehicle automation could help reduce speeds and improve safety since speed limits could be "coded" into the AV. AVs could reduce heavy vehicles traffic by automating some delivery services and shifting it to smaller vehicles

As automakers make plans to invest huge amounts of money on autonomous vehicles over the coming decades, cities and road operators also have a role to play. At the city level, this may be in the form of curb pricing to help nudge autonomous vehicle use towards the desired outcomes. While autonomous vehicles are still at an early stage, a dialogue between transportation policy makers and the transportation industry could help avert the potential negative impacts of autonomous vehicles.

THE LATEST ON AUTONOMOUS VEHICLES

See also Fehr and Peers www.fehrandpeers.com/autonomous-vehicle-research/#:~:text=VMT%20increases%20by%20an%20average,required%20to%20be%20shared%20rides.

www.nhtsa.gov/technology-innovation/automated-vehicles-safety

Victoria Transportation Policy Institute, Autonomous Vehicle Implementation Predictions, www.vtpi.org/avip.pdf

Goods Movement

Goods Movement refers to the transportation of products from the location of their manufacture or harvest to their final retail destination and is a vital component of the regional economy and transportation system. Industries dependent on goods movement provided just under one-third of all jobs in the Bay Area in 2011, and the nation's fifth largest container port is located

in the Bay Area (the Port of Oakland). In Sonoma County, roughly 16,000 people are employed in the goods movement industry.[5]

Highway 101, Highway 37, and the SMART rail on the Northwestern Pacific Railroad (NWP) line are the main arteries for freight distribution in Sonoma County. The Marin-Sonoma Narrows project on Highway 101 is called out as one of the highest priority freight route projects in MTC's 2016 Goods Movement Plan.[6] In addition, Highway 101 from 580 to Santa Rosa is part of the National Highway Freight Network established by the FAST Act for freight project investment.[7]

SMART took over freight rail in 2020 when it bought track rights and equipment from the North Coast Railroad Authority (NCRA). Freight trains share the rail line with passenger service outside of SMART's primary operating hours (6–10 am and 4–7 pm) in order to avoid conflicts with faster passenger trains on the single-track line. More recently, the California Transportation Commission approved funding for SMART to construct modern freight rail spurs, with Positive Train Control systems, and repair the Black Point Rail Bridge over the Petaluma River.

Highway 101 is the primary route that would benefit from diversion of freight from truck to rail. The Draft Environmental Impact Report for resuming operations on the Russian River Division of the Northwestern Pacific Railroad estimates that up to 400 truck trips would be removed in the loaded direction between Novato and Santa Rosa. This is a beneficial impact for the North Bay's transportation system for both congestion relief, pavement wear and emissions.

The major east-west corridor is State Route 37 that follows 21 miles along the northern shore of San Pablo Bay linking US 101 in Novato, Marin County with Interstate 80 (I-80) in Vallejo, Solano County. Near-term plans to reduce congestion and longer-term plans to increase resiliency on the highway could ensure that this corridor remains viable for goods movement in the face of sea level rise.

Trends and Emission Reductions

Goods movement has increased globally for many years, and the COVID-19 pandemic only increased the number of last-mile connector trips as US ecommerce grew over 32 percent in 2020.[8] By 2050, freight movement is forecasted to triple across the globe, with accompanying increases in congestion and GHG emissions.[9]

Improving vehicle technology could help prevent a rise in emissions. Currently, freight and delivery vehicles cause a relatively high amount of congestion and pollution from a small number of vehicles. While cleaner alternatives to heavy duty trucks are just starting to come onto the market, the California Air Resource Board has adopted the Advanced Clean Trucks (ACT) Regulation that will create a larger market for

5 Metropolitan Transportation Commission, *San Francisco Bay Area Goods Movement Plan, February 2016* <http://mtc.ca.gov/our-work/plans-projects/eco- nomic-vitality/san-francisco-bay-area-goods-movement-plan, accessed May 12, 2016>.
6 Ibid.
7 U.S. Department of Transportation, Federal Highway Administration, Freight Management and Operations, <http://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm, accessed June 15, 2016>.
8 U.S. Census Bureau, Quarterly Retail E-Commerce Sales 4th Quarter 2020, www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf
9 Organization for Economic Cooperation and Development (OECD), ITF Transport Outlook 2019, www.oecd-ilibrary.org/sites/transp_outlook-en-2019-en/index.html?itemId=/content/publication/transp_outlook-en-2019-en

these vehicles by requiring roughly 60 percent of new trucks sold in the state to be zero-emission by 2035.[10] Additional charging infrastructure and grid upgrades will be needed to support these vehicles.

The transition to cleaner vehicles will take many years, but improvements in freight logistics could improve congestion and GHG emissions in the near term. Improvements such as route optimization, delivering during off-hours and choosing lighter-weight electric vehicles for last-mile connections could reduce the impact of goods movement.[11]

Distribution centers are increasingly moving closer to their destinations in urban areas. Changes in zoning could even allow distribution centers to operate in retail spaces that are in less demand because of growing e-commerce. This could allow for smaller last-mile delivery vehicles, such as cargo bikes, light electric vehicles and remotely operated or autonomous delivery vehicles.

BICYCLE AND PEDESTRIAN INFRASTRUCTURE

Bicycling and walking are healthy, low-cost, and zero-emissions forms of transportation. When coupled with public transit, bicycling and walking can provide the "first and last mile" of a trip to extend mobility. In addition to reducing emissions produced by gasoline-powered motorized vehicles, replacing vehicle trips with bicycle or walking trips has numerous co-benefits including reduced air and noise pollution, reduced traffic congestion, and improved physical and mental health.

Sonoma County's moderate climate and the relatively flat terrain in the population centers make for an excellent place to bike and walk. The diverse scenic vistas from the mountains to the coast attract cyclists from around the world and bring numerous cycling races and events. Transportation and land use policies such as Complete Streets policies and Priority Development Areas (PDAs) have contributed to an increase in dedicated space for bicyclists and pedestrians in the recent decades. All jurisdictions within Sonoma County have adopted Complete Streets policies, which require consideration to accommodate pedestrians, bicyclists, public transit users, and drivers when developing transportation projects. Infill and PDA development are beginning to shift the layout of our cities toward more walkable, bikeable, and transit-oriented communities. Focused development and complete networks of sidewalks and bicycle facilities lead to convenient distances for walking and biking that are safe and accessible.

> Complete Streets are designed for all users of the street. They are planned, designed, operated, and maintained for safe and convenient access by all users (bicyclists, pedestrians, drivers, transit riders, etc.), with an emphasis on users who's needs have traditionally experienced underinvestment.

Only about eight percent of all trips in Sonoma County are taken bicycle or walking.[12] For commute to work trips, 4.1 percent were by

10 California Air Resources Board, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks
11 Zero Emission Urban Freight, Transportation Decarbonization Alliance, http://tda-mobility.org/wp-content/uploads/2019/05/TDA-Zero-Emission-Urban-Freight.pdf
12 Sonoma County Travel Model.

bicycle or walking in 2018. The percentage of people commuting by bicycle or walking has been declining over the last forty years. (U.S. Census Bureau: 2018 American Community Survey 5-Year Estimates) Although nearly all trips begin and end as pedestrian trips, the mode used for the majority of a trip is used to calculate mode share.

Despite the low share of trips by bicycle and walking, the Sonoma County Travel Behavior Study (2020) demonstrated that there is potential for a substantial shift from vehicle to bicycle and pedestrian trips. Roughly 60 percent of trips in Sonoma County are five-miles or shorter, and nearly 30 percent are less than two-miles. (Sonoma County Travel Behavior Study, 2020) For average riders, a two-mile bicycle ride takes about 12 minutes and can be completed without breaking a sweat. A five-mile bicycle trip is also considered a comfortable distance for an average rider.

Concern about safety is the most frequently cited barrier to bicycling in general and is consistent with the feedback received in Sonoma County related to this plan. Safety improvements for bicyclists and pedestrians were identified as high priorities as was the need to dedicate space for bicycles. Maintaining sidewalks and streets for walking and biking were also cited as important transportation needs.

SCTA endeavors to increase the share of trips being taken by bicycle, walking, and transit through engineering, encouragement, and education. This vision requires a broad network of safe routes that connect all desired destinations.

Since Moving Forward 2040 (2016)

Since the last update of this plan in 2016, dozens of miles of new bicycle facilities were constructed in Sonoma County. These facilities include over 10 miles of the SMART Pathway, Class II bike lanes along the Highway 101 frontage road from Petaluma South Boulevard at Kastania Road to San Antonio Road, a large portion of the planned improvements on local streets in Sebastopol, several miles of Class II lanes on Stony Point Road, Leveroni Road / Napa Road, Petaluma Hill Road, Guerneville Road, Arnold Drive, Adobe Road, and numerous other important improvements.

Many pedestrian specific improvements have been made, including sidewalk completions, ADA compliant curb ramps, new and enhanced crosswalks, and pedestrian signal timing. Several other bicycle and pedestrian projects have advanced through planning, design, securing funding, and environmental clearance.

Three cities in Sonoma County have been recognized as Bicycle Friendly Communities by the League of American Cyclists. The program requires applicants to meet set criteria and provides a roadmap for those awarded to advance to the next level. Sonoma (since 2018) and Healdsburg (since 2014) are recognized as bronze level Bicycle Friendly Communities. In 2019, Santa Rosa was upgraded from a bronze to a silver level Bicycle Friendly Community.

Current system

Bicycle

Sonoma County has approximately 208 miles of built bicycle infrastructure and another 1,013 miles of infrastructure planned. The vast majority of the existing and planned bicycle infrastructure is in the form of Class II bike lanes on street networks.

The bicycle system includes, but is not limited to, the following facility types: Class I, Class II, Class III, Class IV, bicycle boulevards, multi-use trails, traffic calming, signage, bicycle-activated signal detection, and bicycle parking.

- Class I Bikeway (Multiuse Pathway) is a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized (such as the SMART Pathway)
- Class II Bikeway (Bike Lane) is a striped lane for one-way bicycle travel on a street or highway, with the lane designated with striping and signage and/or pavement markings
    - » Class IIB (Buffered Bike Lane) is a Class II bicycle lane with a striped buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane
- Class III Bikeway (Bike Route) is for shared use with pedestrian or motor vehicle traffic with the route indicated just with signage
    - » Class IIIB (Bicycle Boulevard) a Class III on streets designated for bicycle priority with additional treatments such as signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles
- Class IV Bikeway (Cycle Track or Protected Bikeway) provides an on-street bike lane that is buffered from traffic using a physical barrier, such as curbs, planters, or parked cars
- Bike Trails are unpaved recreational trails

Detailed descriptions of bicycle facility types and design guidelines can be found in in the National Association of City Transportation Officials (NACTO), Urban Bikeway Design Guide (https://nacto.org/publication/urban-bikeway-design-guide/) and the American Association of State Highway and Transportation Officials (AASHTO), Guide for the Development of Bicycle Facilities (https://nacto.org/wp-content/uploads/2015/04/AASHTO_Bicycle-Facilities-Guide_2012-toc.pdf).

Class 1 Facilities

In Sonoma County, a large portion of the existing and planned Class I facilities are along creek alignments owned by cities or the County (e.g., Sonoma County Water Agency) and along prior or existing railroad rights-of-way (e.g., SMART Pathway).

The SMART Pathway, with over 15 miles complete within Sonoma County as of 2020 and several more miles under development, is expanding the network and connectivity of Class I facilities in the North Bay. Other major Class I facilities connecting to the SMART Pathway include the Joe Rodota Trail (7 miles) leading east to west from Santa Rosa to Sebastopol, the Copeland Creek Trail (3 miles) through Rohnert Park, and the Petaluma River Trail and Lynch Creek Trail (2.5 miles) in Petaluma. The Joe Rodota Trail links to the West County Trail, a Class I facility, which currently extends to Forestville. Several other Class I facilities connect with the SMART Pathway or are planned to eventually connect with the existing Class I network. The SMART Pathway would also become the Sonoma and Marin portions of the Great Redwood Trail envisioned to provide a bicycle and pedestrian connection from San Francisco Bay to Humboldt Bay.[13]

On-Road Facilities

On-road bicycle facilities include bike lanes (Class II), shared lane facilities or bike routes (Class III), and cycle tracks or protected bikeways (Class IV). Class II and III facilities currently make up the majority of the bicycle network throughout the County. Class IV bikeways, or cycle tracks, are a newer classification adopted by Caltrans in 2015 and have not been implemented in Sonoma County as of 2021. Many of the planned on-road facilities close gaps in the current network or improve intersections and freeway crossings. Barriers such as narrow roads without right-of-way to accommodate bicyclists, freeways, and high-speed and multiple-lane arterials present challenges for the on-the-road bicyclist. Gaps and barriers along the state highway system are well documented in the Caltrans District 4 Bicycle Plan (2018).[14]

Pedestrian

The pedestrian system is comprised of sidewalks, trails, crosswalks, and amenities such as landscaping, tree plantings, lighting and street furniture that create safe and comfortable environments. Design standards are used to create pedestrian areas that are welcoming and feel safe. Land-use is critical to the viability of a pedestrian system, with pedestrian facilities designed to provide access to attractors like schools, offices, restaurants, entertainment, retail, and transit. Gaps in the pedestrian system are often found in locations between the older and newer development, in formerly rural and industrial areas, and in some of the County's unincorporated towns. Barriers imposed by the state highway system are well documented in the Caltrans District 4 Pedestrian Plan (2021).[15] Several pedestrian accommodations have been installed around Highway 101 as part of its recent re-construction.

Pedestrians include people who use wheelchairs and rely on curb ramps and other infrastructure such as accessible pedestrian call buttons to get around. As new pedestrian facilities are built and older ones are upgraded, they must be constructed to be accessible per the regulations of the Americans with Disabilities Act of 1990.

13 Great Redwood Trail, www.thegreatredwoodtrail.org/
14 Caltrans District 4, Bike Plan for the San Francisco Bay Area (2018), https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-bike-plan
15 Caltrans District 4, Pedestrian Plan for the Bay Area (2021), www.catplan.org/d4PedPlan-announce

Vision for the Future

Bicycle and Pedestrian Projects

Bicycle and pedestrian projects make up the largest number of projects in this plan. The list of bicycle and pedestrian CTP projects is derived from the Countywide Bicycle and Pedestrian Master Plan and represents a high priority subset of that list of projects. Bicycle and pedestrian projects that cost over one million dollars are listed individually, while all others are bundled together under one project per jurisdiction. SCTA is planning to develop a transformative update to the Countywide Bicycle and Pedestrian Master Plan in the near future. A few of the largest projects found in the list include:

- SMART Pathway — Includes all projects within SMART's right of way in all Sonoma County jurisdictions from Petaluma to Cloverdale. Other SMART Pathway projects such as the Foss Creek Trail in Healdsburg and Petaluma on-street projects round out the project. Total project costs are estimated at over $40 million
- North Santa Rosa Station Area Bike/Ped Connector over Hwy 101 ($24M)
- Southeast Greenway Multi-Use Path and Crossings ($20M)
- Hwy 1 — Many project phases that make up the 34 miles of class 2 bike lanes along the Sonoma coastline ($18M)
- Hwy 128 — 24 miles of class 2 bike lanes from Napa County to Mendocino County ($18M)

The 103 bicycle and pedestrian projects identified in the CTP originate from the 2014 SCTA Countywide Bicycle and Pedestrian Master Plan. The bicycle and pedestrian project list from the 2014 SCTA Countywide Bicycle and Pedestrian Master Plan has been updated to remove projects completed since 2014 and add new projects submitted for this CTP and include a total of 1,013 individual projects. Bicycle and pedestrian projects with a cost of $1M or higher are listed separately. All projects under $1M are combined into one project for each jurisdiction.

Table 3-3 includes the total miles of the planned bicycle system by Class for each jurisdiction.

Other Bicycle and Pedestrian Needs

In addition to physical bicycle and pedestrian infrastructure, supportive measures are important aspects of bicycling and walking as a means of transportation and recreation. Bicycle and pedestrian supportive programs, including Safe Routes to School, Eco2School, Vision Zero, and Bike Share, are discussed in the next section of this chapter on Mode Shift Programs.

Supportive elements such as wayfinding, route mapping, continuity of regional routes, connectivity to transit, secure bicycle parking, and community education on routes and safety help support and grow active transportation. Comprehensive bicycle signage programs enhance the safety and navigability of existing facilities, especially where there are connections to transit and across jurisdictions. Bicycle parking programs aim to provide adequate bicycle parking amenities to meet the needs of existing and future bicyclists and enhance the overall bicycle system. All of these elements are part of the bicycle and pedestrian system and contribute to the comfort and safety of the system.

Trends

The COVID-19 pandemic brought a "bike boom" with sharp increases in bicycling and bicycle sales across California and the US in 2020. Early on in the pandemic, when vehicle traffic was noticeably lower than usual, bicycling was seen as a safe and attractive way to get exercise and fresh air and bicycle sales more than doubled. These trends continued through the summer and are likely here to stay. In 2020 bicycling increased by 20 percent and approximately 10 percent of Americans either rode for the first time in over a year or used a bicycle in a different way than

TABLE 3-3. TOTAL MILES OF PLANNED BICYCLE AND PEDESTRIAN FACILITIES BY CLASS

Class	I	II/IIB	III/IIIB	IV	Ped	TBD Study	Total
LARGE JURISDICTIONS							
Santa Rosa	39.0	50.4	37.8	2.2	21.2	12.1	162.7
Sonoma County	198.5	332.4	190.4				721.4
Medium Jurisdictions							
Petaluma	22.4	29.5	14.5				66.3
Rohnert Park	7.9	4.8	3.5				16.2
Windsor	7.7	5.3	5.5				18.5
SMALL JURISDICTIONS							
Cloverdale	3.8	2.9	2.1				8.8
Cotati	0.2	0.5	0.4		1.1		2.2
Healdsburg	2.0	0.9	2.9				5.8
Sebastopol	0.4	0.8	1.1				2.3
Sonoma (City)	0.6	4.8	3.4				8.8
Total Miles by Class	**282.4**	**432.3**	**261.7**	**2.2**	**22.3**	**12.1**	**1,013.0**

Countywide Bicycle and Pedestrian Master Plan 2014, 2019 project list update

they had before, such as for transportation or an indoor bicycle.[16] Electric bicycle sales increased 145 percent and pedal bicycle sales increased 65 percent in 2020 over 2019, despite anecdotes of shortages.[17] Many cities saw increased use of bike share and added electric bicycles to their fleets.

Cities responded to the increased levels of bicycling and walking, and the need for physical distancing and open air during the pandemic, by adopting slow streets. These temporary changes to streetscapes included a number of traffic calming measures as well as encroachment on parking areas and traffic lanes to make additional space for outdoor dining and walking. Several efforts are underway to make some of these changes permanent.

Some of the temporary changes made during the pandemic are akin to trends of installing demonstration projects to test out new infrastructure and evaluate how it works in the real world. Demonstration projects, also called quick build or tactile urbanism, can be low-cost and reduce the need for extensive studies and outreach before installation. Testing out street design with temporary installments is especially attractive for bicycle and pedestrian infrastructure as new designs can be experienced by the community and adjusted relatively quickly when needed. The California Bicycle Coalition and Alta Planning + Design published a Quick-Build Guide for planning and implementation (www.calbike.org/wp-content/uploads/2020/10/Quick-Build-Guide-White-Paper-2020.pdf).

16 People for Bikes, Industry and Cities Positioned to Maintain Growth of Bicycling in 2021, www.peopleforbikes.org/news/how-bicycling-changed-during-a-pandemic#utm_source=LINews&utm_medium=email&utm_campaign=1

TABLE 3-4. TRANSIT OPERATIONS

Transit Operator	Service Type	Geographic Area
Sonoma County Transit	Intercity, local	All cities/town in Sonoma County, unincorporated Sonoma County including Sonoma Valley and Russian River areas, and between communities
Santa Rosa CityBus	Local	City of Santa Rosa
Petaluma Transit	Local	City of Petaluma
Golden Gate Transit	Inter-city — commuter bus	Along Highway 101 between Santa Rosa, Marin County, and San Francisco. Connects to Marin to East Bay routes
Sonoma-Marin Area Rail Transit	Inter-city — commuter rail	Twelve stations located between the Sonoma County Airport, north of Santa Rosa, and the Larkspur Ferry Terminal in Marin County
Mendocino Transit Authority	Inter-county	Between Santa Rosa and Ukiah in Mendocino County, and to several communities along the Sonoma and Mendocino coast
Marin Transit	Dial-a-ride services	From Tomales and Dillon Beach in West Marin into Petaluma

17 New York Times, Farther, Faster and No Sweat: Bike-Sharing and the E-Bike Boom, March 2, 2021, www.nytimes.com/2021/03/02/travel/ebikes-bike-sharing-us.html

PUBLIC TRANSIT SERVICES

Public transit plays a critical role in the transportation system as it provides access to economic opportunities as well as social and environmental benefits. Using public transit in place of owning a vehicle for every driver in a household can greatly reduce household expenses for transportation. The estimated average cost of owning a vehicle in the U.S. was $6,201 annually in 2019.[18] Replacing vehicle trips with transit trips also reduces greenhouse gas emissions, air pollution, traffic congestion, and demand for parking.

In 2019, there were over 4.4 million rides on public transit in Sonoma County. Of those rides, roughly 84 percent were by bus and 16 percent were by rail. According to on-board transit surveys conducted in 2018, over 70 percent of bus transit riders and 26 percent of train riders in Sonoma County are very low-income and a large percentage do not have access to a vehicle. High school and college students also make up a significant portion of bus transit riders. Public transit provides essential services to people who cannot drive due to disabilities.

Public transit service in Sonoma County includes local and regional bus routes, and regional passenger rail, operated by six independent agencies (see Table 3-4).

Since Moving Forward 2040 (2016)

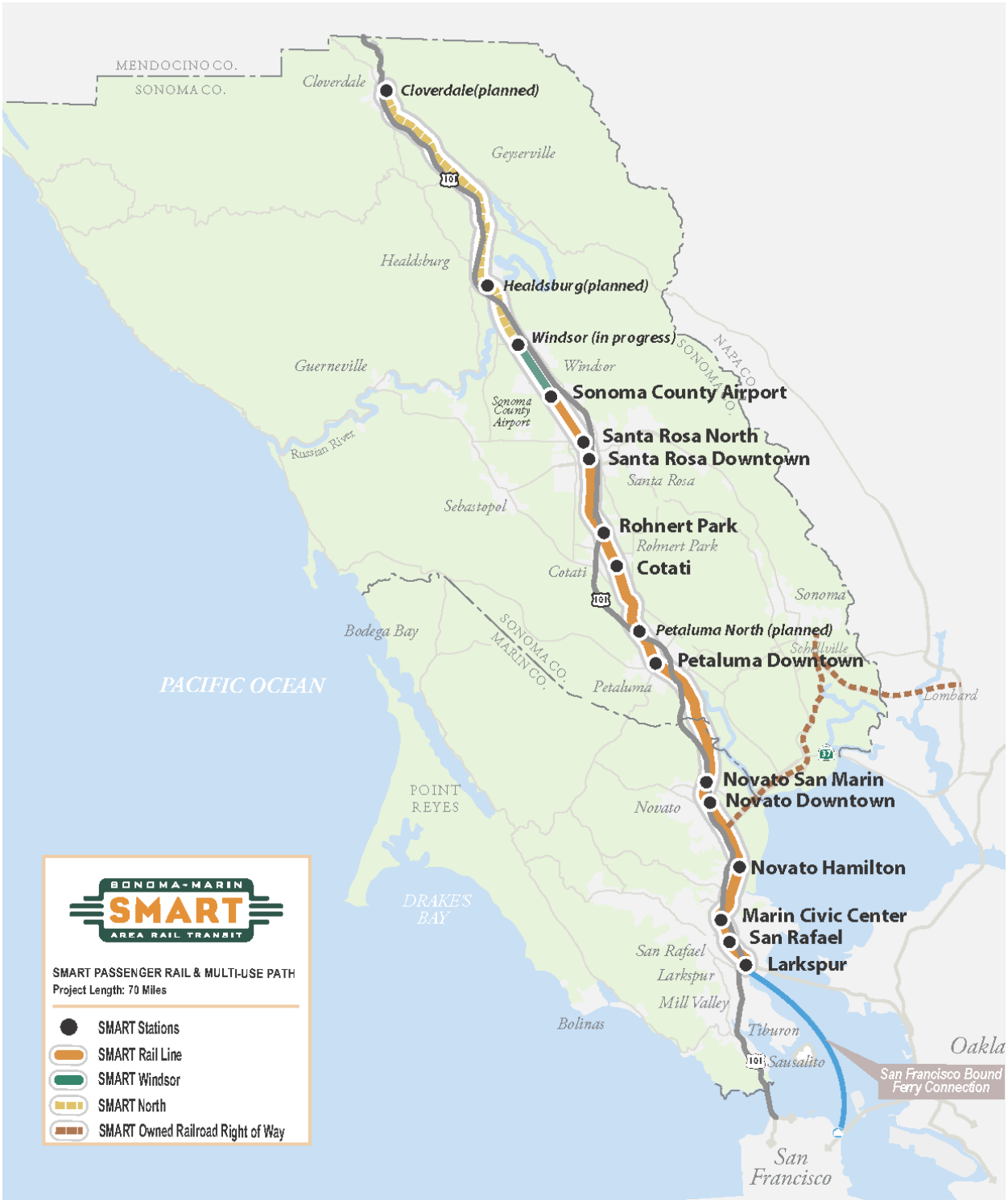
Passenger Rail — Sonoma-Marin Area Rail Transit District

On August 17, 2017, the Sonoma-Marin Area Rail Transit District (SMART) launched passenger rail service along a 43-mile corridor serving 10 stations in Sonoma and Marin Counties: near the Sonoma County Airport, in Santa Rosa (2), Rohnert Park, Cotati, Petaluma, Novato (2), and San Rafael (2). In December 2019, SMART opened a new station in Larkspur, extending the tracks to 45-miles and connecting to the Larkspur Ferry Station with service by Golden Gate Ferry to San Francisco. SMART also opened the Downtown Novato station, in Marin County, in December 2019.

Future expansion of the SMART system includes extension of service north to Windsor, Healdsburg, and Cloverdale, and an infill addition of a second station in Petaluma. SMART has secured funding to extend service to Windsor and has commenced construction on this section. One of the fund sources in the project funding plan, remains under litigation with the State Supreme Court, resulting in the stoppage of work on the Windsor SMART extension. SMART continues to seek funding to restart the project in

18 American Automobile Association, AAA Exchange, Your Driving Costs: 2019, http://exchange.aaa.com/ <accessed July 1, 2020>.

FIGURE 3-3. SONOMA-MARIN AREA RAIL TRANSIT DISTRICT (SMART) SYSTEM MAP



advance of the litigation resolution. Rail service was anticipated for late 2021 and has been delayed pending receipt of additional funds.

Bus Route Improvements and Connections to SMART

In summer 2017, Santa Rosa CityBus implemented the first phase of their 2016 long-range plan Reimagining CityBus. With no additional revenue, CityBus improved their network with more direct and bi-directional routes that run on either 15-minute or 30-minute headways. Two high-frequency 15-minute, bi-directional bus service corridors were developed; a north-south route on Santa Rosa Avenue/Mendocino Avenue/Bicentennial Way/Range Avenue and an east-west route on Sebastopol Road/Third Street. The high-frequency corridors added significant service to connect with the two SMART stations in Santa Rosa.

To provide connections to SMART service, Sonoma County Transit adjusted schedules for several routes and added service to accommodate anticipated demand for connections.

Petaluma Transit also adjusted timetables for the three routes that serve the Petaluma SMART Station area. Service was expanded to connect to the Kaiser Hospital. Additionally, several bus stop relocations and enhancements were made to support passengers transferring between bus and rail.

Transit Information

Real-time information signs have been installed at the transit malls in Santa Rosa and Petaluma, at major hubs and transfer centers throughout the County, and at numerous high-volume bus stops throughout the county. With real-time arrival signs, passengers can see how much time they have before their bus arrives or if they just missed one.

In fall 2017, when Santa Rosa CityBus moved their offices from City Hall to their transit operations facility, CityBus opened a staffed customer service kiosk at the Santa Rosa Transit Mall to sell transit tickets, passes, and Clipper® cards. CityBus staffs the customer service kiosk from 8:30 a.m. to 4:30 p.m. Monday through Friday. Transit Service Representatives (TSRs) who provide customer information on routes and schedules for all operators, patrol the Transit Mall assisting passengers. These services help riders who need assistance finding connections or information on how to get to their ultimate destinations.

Fare Programs

Over the last four years, transit operators developed several new fare discount and free programs. Through partnerships with the Santa Rosa Junior College currently enrolled students who attend campuses in the cities of Petaluma or Santa Rosa can ride for free on Sonoma County Transit, Santa Rosa CityBus, and Petaluma Transit buses. In addition, Sonoma County Transit has an agreement with Sonoma State University that provides free rides on Sonoma County Transit by its students. SMART also has arrangements for discounted rides for SRJC students via the SMART Eco Pass program.

In 2018, Santa Rosa joined Sonoma County Transit in offering free rides for veterans on fixed-route transit. SMART has offered free rides to veterans and active duty military and their families on Memorial Day and Veterans' Day weekends and continues to work to identify a veterans' organization to facilitate

implementation of a veteran discount program through SMART's Eco Pass program.

In June 2018, Sonoma County Transit began its first "Fare-Free" local route. "Fare-Free" routes have now been established for local routes in Cloverdale, Healdsburg, Windsor, Sebastopol, Guerneville/Monte Rio, and Sonoma/Sonoma Valley. This program has resulted in a significant increase in ridership on the "Fare-Free" routes, with some riders citing the ease of boarding without needing to plan ahead for paying for a ride or purchasing a pass as an attraction.

In 2020, Golden Gate Transit, SMART, Sonoma County Transit, Santa Rosa CityBus, and Petaluma Transit joined the Clipper START pilot program to offer a fare discount for low-income riders. Through the Clipper START program, qualifying low-income riders receive a 50 percent discount on SMART and Golden Gate Transit, and a 20 percent discount on the local bus systems for single ride tickets.

New options for fare payment through mobile apps have emerged since 2016. With the start of service, SMART included a mobile application payment option for single and group rides through Masabi. In December 2019, Sonoma County Transit introduced a similar mobile application payment system for passes and single rides on both fixed-route and paratransit through HopThru. Clipper, the Bay Area's universal fare payment card, launched a new mobile app option in spring 2021 and is working on several other upgrades for transit agencies throughout the Bay Area.

Fleet Electrification

In 2018, Sonoma County Transit put into operation the first fully electric transit bus in the county. Sonoma County Transit in 2021 has three electric transit buses that regularly operate in Sebastopol, Rohnert Park, and Cotati. In 2019, Sonoma Clean Power funded a battery electric bus planning and engineering study for Mendocino Transit, Sonoma County Transit, Petaluma Transit and CityBus. In 2020, the City of Santa Rosa began participating in the PG&E EV Fleet Electrification program to install charging infrastructure for the planned nine CityBus battery electric buses by 2024. Sonoma County Transit and Santa Rosa CityBus now have additional electric buses on order. These efforts mark the beginning of the county's transition to a zero-emissions fleet. The California Air Resources Board's 2018 Innovative Clean Transit (ICT) Regulation requires that small bus operators make one quarter of all new purchases be zero-emissions starting in 2026 and large bus operators by 2023. The ICT regulation requires that all new public transit buses purchased after 2029 be zero-emission, with a goal that all buses in California are zero-emission by 2040.

Current System

Transit routes and operators in Sonoma County are connected through a network of shared stops, transfer centers, rail stations, and regional hubs.

The Santa Rosa Downtown Transit Mall is the largest hub in Sonoma County and is estimated to serve over 10,000 passengers daily on Santa Rosa CityBus, Sonoma County Transit, Golden Gate Transit, Mendocino Transit, and Greyhound.

The Petaluma Transit Mall, located just west of the downtown Petaluma SMART station, serves as a transfer hub for Petaluma Transit, Sonoma County Transit, Golden Gate Transit, and Amtrak Thruway Service.

Transit hubs located at the current and the future SMART stations in Cotati, Windsor, and Healdsburg are served by Sonoma County Transit. The Cloverdale Depot is also served by Amtrak Thruway Service. Most of these transfer hubs also serve as park-and-ride lots.

SMART and Golden Gate Transit routes from Sonoma County continue to the Bettini Transit Center in San Rafael and the Golden Gate Ferry Terminal in Larkspur, which provide connections to San Francisco and the East Bay.

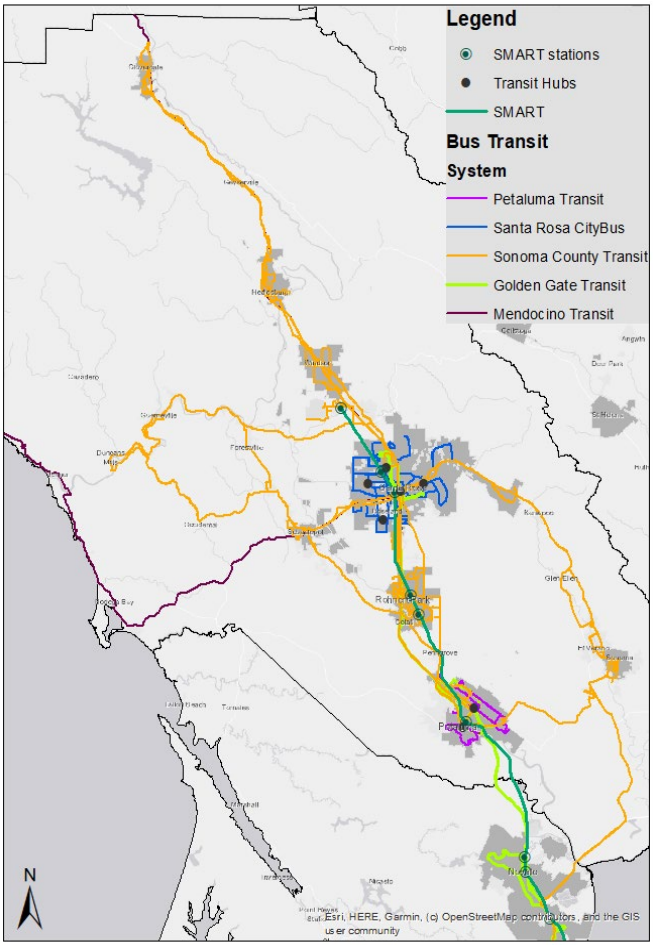
Paratransit Service

Paratransit is a door-to-door service available to persons who, due to a disability, are unable to use the fixed-route transit system. All bus systems in Sonoma County provide paratransit service within at least a 3/4 mile radius of an active bus route per requirements of the Americans with Disabilities Act (ADA) enacted in 1990. This civil rights legislation mandates equal opportunity in employment, transportation, telecommunications, and places of public accommodation for people with disabilities. The ADA paratransit requirement does not apply to commuter bus, commuter rail, and intercity rail systems. Paratransit service must be comparable to the public transit operator's fixed-route service regarding the following service criteria: comparable response time, similar fares, same geographic area of service, no restriction of trip purpose, equal availability of information, and no constraints on capacity.

All four bus transit operators contract out their paratransit services. Santa Rosa and Petaluma both currently have contracts with MV Transportation to provide curb-to-curb paratransit service that will deliver patrons within their respective city limits. Sonoma County contracts with the Center for Volunteer and Nonprofit Leadership to provide paratransit service through Volunteer Wheels in a service area and during service hours comparable to Sonoma County Transit's fixed-route system. Golden Gate Bridge, Highway and Transportation District (GGBHTD) offers inter-county demand-response paratransit service within a 3/4 mile radius of all non-commute Golden Gate Transit routes through Marin Transit's current contracted paratransit provider, Whistlestop. Paratransit passengers may travel across multiple transit service areas by arranging transfers through the agency that administers the client's paratransit eligibility. Golden Gate Transit provides service beyond the hours of CityBus, Sonoma County Transit, and Petaluma Transit. During very early morning or very late evening hours, when those providers are not in operation, Golden Gate Transit will often take the client to their final destination without a transfer. Since the pandemic, CityBus, Sonoma County Transit, and Petaluma Transit have been piloting a "one-seat ride" model for paratransit, which eliminates transfers between these agencies.

Transit Routes and Ridership

FIGURE 3-4. PUBLIC TRANSIT ROUTES AND HUBS

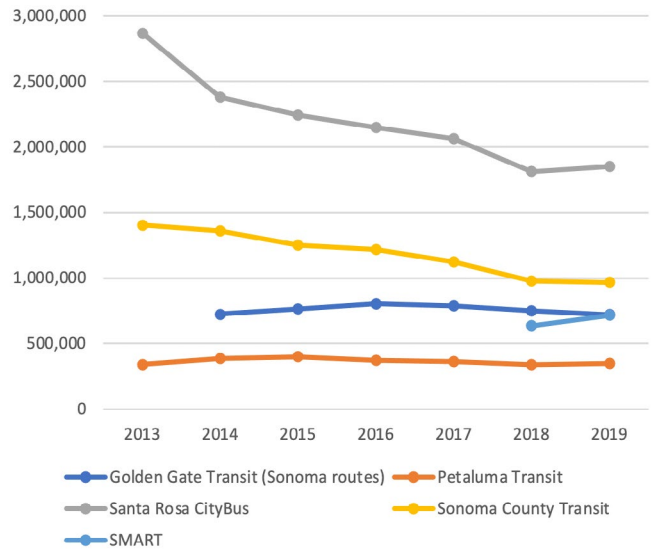


Transit ridership tends to fluctuate with the economy and fuel prices. In Sonoma County, ridership grew with population and development from the 1990s and 2000s. Average weekday boardings are a good indicator of transit use for work and school commutes. A noticeable increase in average weekday commutes was seen in 2018. Overall transit ridership increased in 2019 through early 2020.

FIGURE 3-5. AVERAGE WEEKDAY BOARDINGS FOR PETALUMA TRANSIT, SANTA ROSA CITYBUS, SONOMA COUNTY TRANSIT, AND SMART

Source: Federal Transit Administration, National Transit Database

FIGURE 3-6. ANNUAL TRANSIT RIDERSHIP 2013-2019



Sources: Federal Transit Administration, National Transit Database

Golden Gate Bridge, Highway & Transportation District, Short-Range Transit Plans 2017, 2019

Transit ridership in Sonoma County has grown with population and development, with a marked

increase in early 2020, prior to the onset of the COVID-19 pandemic. SMART's extension to Larkspur and ferry terminal connection in December 2019 contributed to increased rail ridership, and bus ridership also increased. The COVID-19 pandemic has had significant impacts to transit ridership, which are discussed further below.

Issues and Opportunities

Sonoma County has a high intra-county commute with 89 percent of weekday trips occurring within the county (Sonoma County Travel Behavior Study, February 2020), indicating a good job-housing balance. The high internal commute points to the opportunity for robust transit; however, transit in Sonoma County faces several obstacles to attracting choice riders. Operating hours for many transit routes are focused on the 8am to 5pm commute schedule and often do not meet the needs of shift workers and students with evening classes. The rural nature and low population-density in much of unincorporated Sonoma County makes it difficult to efficiently provide transit service for all residents. Vehicle ownership in Sonoma County is fairly high, averaging more than one registered vehicle per licensed driver (Department of Motor Vehicles, Registered Vehicles 2019). Parking in Sonoma County is ample and generally free, with the exception of downtown Santa Rosa. The suburban and rural character of Sonoma County, coupled with high auto ownership and ample free parking, contribute to a commute that is dominated by driving alone — 77.1 percent of workers (US Census, American Community Survey, 2018).

With limited resources for operations, bus transit operators often struggle with the balance of providing coverage in low-ridership areas for those who rely on transit and providing more frequent headways where there is demand. High-frequency routes, running every 15 minutes or less, attract riders because they enable people to take trips without planning around the transit schedule. Still there is a need to provide transit service for those who depend on it in less populated areas where high-frequency routes are not viable.

Growth in Sonoma County will lead to increased road congestion if mode split trends continue. Road congestion can negatively impact bus schedule reliability. However, planned growth in city centers and around transit hubs has the potential to increase transit demand and increase revenue streams to allow for expansion. Further integration of the various transit systems will allow more seamless travel across the county and throughout the region and attract new riders.

Pandemic Impacts and Recovery

The Covid-19 pandemic has created challenges for public transit, requiring short-term response and will require long-term planning for recovery. Transit experienced steep declines in ridership due to shelter-in-place orders, with local bus service dropping to roughly 48 percent of pre-pandemic ridership. Since May 2020, ridership has been increasing but as of spring 2021 remains significantly lower than pre-pandemic as many regular riders continue to work from home, have lost jobs, or are concerned about exposure to the virus. Ridership is expected to increase significantly in fall 2021 when students, who make up a large portion of regular ridership, return to school and a greater number of adults return to on-site work.

To promote physical distancing between drivers and riders, local bus transit operators in Sonoma County suspended fare collections from March

2020 through February 1, 2021. In addition to fare revenues, transit in Sonoma County depends heavily on funding from sales and fuel taxes for operations that were affected by the pandemic. Reduced demand coupled with lost revenues from rider fares, diminished tax revenues, and increased costs related to enhanced cleaning methods required operators to reduce service starting in the spring of 2020. Restoration of some of the local bus routes began in the summer of 2020 and continued to be phased back into 2021. Tax revenues continue to be in flux and difficult to predict. The future consequences to transit ridership of the COVID-19 pandemic are unknown at this point due to seemingly dramatic shifts underway with continued remote work and changed work locations, as well as population shifts due to residents relocating.

Response to the impact of the pandemic on transit has taken place at each level of government. At the regional level, MTC established a Blue Ribbon Transit Recovery Task Force to address the distribution of funds through the CARES Act, uniform health and safety protocols during the pandemic, and a Public Transit Transformation Action Plan to re-shape the region's transit system into a more connected, efficient, and user-focused network across the Bay Area and beyond. The Plan will take into consideration recovery plans submitted by each transit agency.

Vision for the Future

Transit Plans

Numerous transit plans have been completed that will help shape transit recovery and development moving forward. Several agencies have developed plans for future system expansion and collaborative plans have outlined how multiple agencies can effectively coordinate for greater integration between systems and seamless travel.

- *SCTA Future of Transit Ad Hoc Committee* — A subset of the SCTA Board of Directors formed in 2020 to discuss priorities for implementation of recommendations from the 2019 Transit Integration and Efficiency Study in light of changed circumstances from the pandemic. The Ad Hoc identified the primary goal to increase transit ridership as a mechanism to reduce GHG emissions, improve access to low-cost transportation, and reduce congestion.
- *Bay Area Public Transit Transformation Action Plan, July 2021* — Succeeding a growing focus on "seamlessness" of the Bay Area's transit network, the COVID-19 pandemic prompted MTC to lead a Blue-Ribbon Transit Recovery Task Force that is tasked with developing a Bay Area Public Transit Transformation Action Plan. The Plan will have a five-year horizon to 2025 and should identify actions needed to re-shape the region's transit system into a more connected, efficient, and user-focused mobility network across the entire Bay Area and beyond.
- *Connected Communities Transportation Study, Spring 2021* — Sonoma County Human Services Area Agency on Aging Department has been working on the Connected Communities Transportation Study to examine the needs and gaps in transportation services for seniors, people living with disabilities, and isolated individuals. A report detailing needs and recommendations for public transit, volunteer driver and other transportation

programs for the focus demographics was finalized spring 2021.

- *Short Range Transit Plans* — MTC requires that each transit operator in its region receiving federal funding, prepare, adopt, and submit to the MTC a Short-Range Transit Plan (SRTP) in order to effectively execute planning and programming responsibilities included in the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP). In early 2010, MTC initiated its Transit Sustainability Project (TSP), which includes a goal to that public transit is an accessible, user-friendly, and coordinated network. Fulfillment of this TSP goal is facilitated through development of a joint appendix to the Short-Range Transit Plans that documents progress and goals on agency coordination.
- *Battery Electric Bus Planning and Engineering Study, 2020* — A multi-agency Battery Electric Bus Planning and Engineering Study was completed in January 2020 analyzing electric bus fleet and facility needs in the near/mid-term time frame (next 5 years). The study, sponsored by Sonoma Clean Power, reviewed facility, route, and charging needs for Sonoma County Transit, Petaluma Transit, Santa Rosa City Bus, and Mendocino Transit.
- *Transit Integration and Efficiency Study, 2019* — In 2019, SCTA adopted the Transit Integration and Efficiency Study, which recommends actions that Sonoma County Transit, Santa Rosa CityBus, and Petaluma Transit could take to deliver more seamless transit service that improves passenger experience, reduces operating and capital costs, and better integrates the existing operating systems.
- *SMART Passenger Rail Engineering Feasibility Study — Novato to Suisun City, 2019* — report on the feasibility of providing passenger rail connectivity between the SMART passenger rail system in Novato and the Capitol Corridor passenger rail system in Suisun City, providing an east-west connection to expand transit connectivity in the Hwy 37 corridor between Marin, Sonoma, Napa, and Solano counties.
- *SMART Strategic Plan, 2019* — SMART Phase 2 plans include extension of the system north to Windsor, Healdsburg, and Cloverdale, a station at North Petaluma, and the construction of additional pathway segments. Completion of the extension to Windsor was expected in late 2021 but is currently suspended pending the resolution of funding issues while Regional Measure 3 funds remain under litigation.
- *SMART Commuter Rail Integration Plan, 2016* — In preparation for the commencement of SMART, MTC developed the SMART Commuter Rail Integration Plan in 2016 to address opportunities for integration of SMART commuter rail, bus service, and other first and last mile modes.
- *Reimagining CityBus, 2016* — Santa Rosa CityBus completed a long-range planning effort as a blueprint for the build-out of the ideal transit system, called Reimagining CityBus. The first phase of the plan was implemented in 2017 with comprehensive system redesign to improve efficiency and effectiveness of the bus system through route realignments and increases

in frequency and directness. Phase 2 of Reimagining CityBus is a roadmap for transit system improvements such as extended late night and weekend service, expansion of 15-minute frequency network to be incorporated as funding becomes available, and increased transit speeds with rapid bus facilities, implementation of innovative service models to complement and feed into fixed routes.

Transit Vision

In addition to adopted plans, transit agencies have identified priorities for the near term and through Moving Forward 2050 horizon. These priorities are reflected in the 39 transit projects listed in this plan.

Projects

Bus and Rail Transit projects are divided into two different categories:

- **Transit Capital Projects** — representing the capital cost of maintaining or expanding service through projects such as bus replacements, bus stop improvements, and SMART extensions.
- **Transit Improvements** — Non-Capital: representing the cost of maintaining existing service and the non-capital costs associated with expanding service (e.g., fare free programs, increased hours of service). Maintenance of transit service is required to be budgeted using known fund sources, and maintenance costs are required to be listed as fully funded.

Key expansion projects included in the updated plan are:

- Transit fleet and facility electrification
- Service increases for all transit systems
- SMART rail service to Cloverdale, including purchase of new vehicles and maintenance facilities
- Additional SMART stations in Petaluma, Windsor, Healdsburg and Cloverdale
- SMART Pathway construction providing first/last mile access to SMART stations
- Rapid bus projects
- Maintenance shops, bus yards, and bus stop improvements
- Technology — passenger information and fare technology, transit signal priority projects

Service Expansion

The quality of transit service is a strong determinant of bus ridership. A system that is reliable, is safe, and has a schedule that people can plan their days around helps retain regular riders and attract choice riders. Such a system has enough frequency that minimizes long wait times and transfer times, with travel times that are more comparable to driving. Hours of operation and geographic coverage are also important to ensure that people can travel where they want to go during the hours they need to travel.

There is currently no transit service on Highway 37 connecting Sonoma County with Napa and Solano counties to the east. Peak hour congestion on this corridor limits the benefit that transit could provide, especially where there is only one travel lane in each direction. Expansion of transit on this corridor will be considered along

with implementation of the Highway 37 improvement project that is discussed in the Roads and Highways section above. This project would expand capacity and allow for transit to move past traffic during commute times.

Service expansion projects in this plan total over $333 million, in addition to operations and maintenance costs through 2050. These projects directly meet the goal of a *Connected and Reliable* transportation system and the objective to provide a robust and well-coordinated local and regional transit system. Transit service expansion could also help fulfil the goals for a transportation system that is *Community Oriented and Place-Based, and Zero-Emissions.*

Affordability

Affordability of transit is a key equity consideration and, as discussed above, all transit systems in Sonoma County are piloting programs to offer reduced fares or to eliminate fares. These programs include "Fare-Free" service on local Sonoma County Transit routes, "Fare-Free" rides for college students on local bus transit, free rides for veterans on Sonoma County Transit and Santa Rosa CityBus, income-based fare discounts through Clipper START, and discounts for certain passenger types such as K-12 students, seniors, and riders with disabilities. CityBus is also considering programs to provide employers and developments access to "Fare-Free" for their employees and residents. Many programs rely on a subsidy provided by a state or local program, or contributions. Maintaining and expanding these programs can enhance access to jobs and education, while ensuring equity in the transportation system.

Full implementation of "Fare-Free" programs for the three local bus operators from 2022 through 2050 would cost an estimated $117 million. Work toward a more affordable transit system aligns with the Moving Forward 2050 goal for a *Connected and Reliable transportation system and the guiding principle of equity.*

Multi-modal Access

Multi-modal access to and on transit is key to a fully integrated transit network. Safe and accessible pedestrian facilities connecting to transit hubs is an important element of transit access. Bicycle routes leading to transit, and secure parking and bike share at transit hubs, and accommodating bicycles onboard transit vehicles are critical to facilitating transit use and reducing auto trips. All buses are equipped with bicycle racks on the front of the vehicles. SMART has installed bike racks and electronic BikeLink bicycle lockers at every SMART Station. SMART also allows bicycles onboard trains and 11 percent of passengers brought their bicycles onboard trains prior to the COVID pandemic. That figure has grown to greater than 20 percent during the pandemic. Further multi-modal transit access integration is occurring with the implementation of the Marin-Sonoma Bike Share project in 2021, where bike share hubs are being located at major destinations, including around rail stations and major bus hubs.

Improved Facilities and Fleet

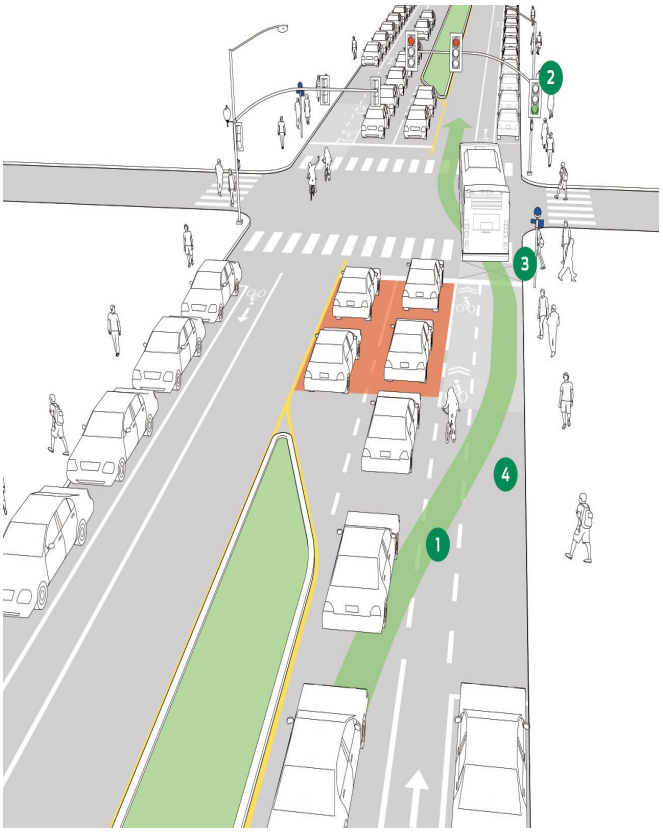
Improved facilities for getting to transit and waiting for transit can make a big difference to the rider experience. People are more likely to use transit if they can walk to it and have a safe and comfortable place to wait. Upgrading passenger amenities at bus stops is a priority throughout the county. Transit operators have plans to upgrade and expand the availability of bus shelters countywide, with focus on schools,

employment sites, and other major trip generators. Plans for improvements also include installing benches at all bus stops, improving lighting at bus stops, expanding real-time bus arrival information and other public information at bus stops countywide, adding additional bike racks at bus stops and intermodal facilities, and maintaining and improving key intermodal hubs throughout the county. Continuing to work with local jurisdictions to improve walkability, ADA accessibility, and pedestrian access to transit stops also supports transit.

Engineering solutions on high-frequency bus corridors can optimize transit efficiency by speeding up bus service to better compete with the automobile. Some examples of engineering solutions are Rapid Bus and Bus Rapid Transit (BRT) facilities, including the following elements:

- Transit signal priority — modification of traffic signal timing or phasing when transit vehicles are present
- Queue jump lanes — short, dedicated transit lanes to allow buses to easily enter traffic flow ahead of traffic or bypass congested intersections
- Express Bus service — routes or runs with fewer stops to speed up travel time
- Bus Rapid Transit (BRT) — dedicated bus lanes, often including high-quality stations in the center of the road with platform-level boarding and off-board fare collection.

FIGURE 3-7. QUEUE JUMP LANE



Source: *Transit Street Design Guide, NACTO, April 2016*

Fleet maintenance, expansion, and electrification

Maintenance and improvement of the transit fleet are key components of safe, clean, and efficient transit operations. Adding transit service often requires expansion of the transit fleet.

The California Air Resources Board's Innovative Clean Transit rule requires all public transit agency fleets to transition to 100 percent zero-emission buses (ZEB) by 2040, with a portion of purchase requirements for large operators beginning in 2023. Local transit agencies have taken steps to begin transitioning to zero-emissions fleets earlier than required, by

purchasing electric buses and completing the Battery Electric Bus Planning and Engineering Studies to address their infrastructure needs. A full transition may require a network of en-route charging and insurance of resilience during power outages and emergencies.

Transit capital improvements projects including fleet electrification, fleet expansion, and rail extension, total over $836 million. Implementation of the transit capital improvements would advance all four of the Moving Forward 2050 goals; *Connected and Reliable, Safe and Well-Maintained, Community Oriented and Place-Based, and Zero-Emissions.*

Inter-agency Coordination

In addition to meeting regularly to coordinate and share information, transit operators serving Sonoma County have developed or been included in numerous plans for increased coordination and integration. MTC's Transit Sustainability Project (2012) identified the need for increased multi-operator coordination in Sonoma County, which spurred the development of a joint appendix to the operator Short Range Transit Plans detailing coordination efforts and goals.

Subsequently, multiple studies and plans have focused on more specific areas of coordination, including bus and rail coordination (SMART Commuter Rail Integration Plan, 2016), local bus operator integration and efficiency (Transit Integration and Efficiency Study, 2019), and transportation needs for seniors and people living with disabilities (Connected Communities Transportation Study, 2021). Coordination and more seamless integration have also been a focus at the regional level, with a report by SPUR on Seamless Transit in 2015[19] and new regional strategies led by MTC to improve transit efficiency across the Bay Area and provide more seamless multimodal mobility.[20] Local bus operators have identified service planning coordination and collaboration on information sharing with the public as high priorities for near-term recovery.

A well-coordinated transit system that is easy to navigate and use to reach a variety of destinations is more attractive to new riders and more likely to retain existing riders. Inter-agency coordination supports the Moving Forward 2050 goal for *Connected and Reliable that a well-coordinated local and regional transit system, as well as ensuring options for youth and older adults.*

Trends

Technological innovations have the potential to optimize transit productivity through improved trip planning and user experience. As technological advances demonstrate effectiveness through pilot programs around the globe, transit agencies are adopting new methods to improve efficiency.

Micro-transit, or on-demand transit, uses technology to offer flexible dynamic routing and scheduling based on riders' needs. In some lower ridership areas, micro-transit has shown to be more efficient than fixed-route transit as it dynamically routes service to where there is demand. Replacing certain fixed-routes with

19 San Francisco Bay Area Planning and Urban Research, Seamless Transit: 2015, www.spur.org/sites/default/files/publications_pdfs/SPUR_Seamless_Transit.pdf <accessed October 16, 2020>.

20 Blue Ribbon Task Force Approves Actions To Guide Post-Pandemic Future of Bay Area Transit Network, MTC, July 26, 2021. https://mtc.ca.gov/news/blue-ribbon-task-force-approves-actions-guide-post-pandemic-future-bay-area-transit-network

micro-transit may allow agencies to redirect resources to increase service on fixed-routes with high ridership.

There has been an increased focus on technologies to improve the rider experience by making the trip planning process easier and more seamless. Third party trip-planning apps have made trip planning more convenient, especially where all operators in a region appear on the same app. As adoption of these technologies advance, riders can expect more readily available information and tools.

Automation of transit is an intriguing and transformative prospect as it could drastically reduce the cost of operations. As autonomation advances, autonomous shuttle pilot projects have been taking place in increasing locations around the world. These demonstration projects have generally been focused on relatively controlled environments with simple fixed routes, fixed sets of stops, and slow speeds. Vehicle automation has come a long way, but in 2020 there is still significant work to be done on to perfect the technology, consider the impacts of automation in policies, and adapt infrastructure to the needs of automation. UC Davis' *3 Revolutions Future Mobility Program* emphasizes the need for autonomous vehicles to be both shared and electric to reduce greenhouse gas emissions and avoid congestion and unintended land use changes that could degrade quality of life.

Additional Senior Mobility Programs

The Sonoma County Area Agency on Aging currently manages and coordinates several mobility programs that support volunteer driver programs, taxi voucher programs, and shuttle services. Volunteer driver programs help meet the transportation needs of disabled and senior residents in Sonoma County, especially in more rural areas where transit service is less available. Volunteers provide rides for medical and social service appointments for seniors, visually challenged seniors, and others who are unable to use local transportation systems.

Volunteer driver programs currently supported by the Area Agency on Aging include the Sebastopol Area Senior Center Volunteer Driver Transportation Program (West County), Petaluma People Services Center iRIDE (South County), Catholic Charities' volunteer driver program (Santa Rosa), and Vintage House Local Independent Mobility Options Program (Sonoma Valley). Through a Caltrans grant, the Area Agency on Aging initiated a uniform ride scheduling software platform called Assisted Rides for these volunteer services. Friends in Sonoma Helping (F.I.S.H.), Coastal Seniors, City of Healdsburg DASH, and West County Community Services also run volunteer driver programs.

Information about mobility options that address the needs of disabled and senior residents of Sonoma County can be found through Sonoma Access (www.sonomaseniorsaccess.org), a one-stop website and referral center. Sonoma Access was initially established by the City of Santa Rosa and is now administered through the Sonoma County Area Agency on Aging with funding from a federal New Freedom grant and a federal Enhanced Mobility of Seniors and Individuals with Disabilities grant. The Area Agency on Aging also provides information and assistance to seniors, including information on transportation options, through a hotline (707-565-INFO).

MODE SHIFT PROGRAMS

On-road transportation accounts for 60 percent of greenhouse gas emissions within Sonoma County (Sonoma County Greenhouse Gas Inventory, 2018 Update). The RCPA's passage of the Climate Emergency resolution in September of 2019, and the global climate crisis, brings urgency to expanding transportation choices in our community. As the built environment in Sonoma County favors single occupancy vehicles as an easy and convenient form of transportation, providing incentives, education, and marketing for alternative travel choices is essential.

Mode shift programs, often referred to as transportation demand management (TDM), are a collection of methods and actions intended to improve the efficiency of the existing transportation system by reducing the demand for single occupancy vehicle travel, especially during congested peak commute hours. Programs are maintained by employers, transit operators, community-based organizations, and government agencies. A variety of approaches can be used, including providing education and resources on the importance of mode shift, providing incentives for participation through money and time saved, or improving the ease at which cleaner transportation options are accessed. The strength and presence of these programs continue to grow and will be instrumental in ushering in a safer, cleaner and more efficient transportation system in Sonoma County.

Subsidies and Incentives

Transit discounts are available on all systems in Sonoma County for youth, seniors, and individuals living with a disability. Local college students may ride local bus transit for free in Sonoma County. Veterans also ride free on Sonoma County Transit and Santa Rosa CityBus. SMART also offers its monthly discounted Eco Pass to college students and veterans. In 2020, all transit operators in Sonoma County joined the Clipper START pilot program, which provides 20 to 50 percent discounts to low-income adults.

Employer incentives for commuting by transit, vanpool, or bicycle can reduce workplace parking demand, reduce congestion, save employees and employers money, and help with employee recruitment and retention. Companies and organizations throughout Sonoma County offer a variety of incentive packages for employees to utilize commuting options other than single occupancy driving. Employers within the Bay Area Air Quality Management District (BAAQMD) with over 50 full-time employees are required to register with the Bay Area Commuter Benefits Program and offer pre-tax benefits, employer-provided subsidies, employer-provided transit, and/or alternative commuter benefits.

The Federal tax code allows the use of tax-free dollars to pay for transit, vanpool, and parking costs through employer-sponsored programs. For the 2020 taxable year, the tax code allows tax-free transportation fringe benefits of up to $270 per month per employee for transit expenses and up to $270 per month for qualified parking (including parking at transit stations, vanpool or carpool sites, or employer's worksite). Employees do not pay federal income or payroll taxes and employers do not pay payroll taxes on income set aside for pre-tax commuter benefits.

While bicycle incentives are not currently eligible for pre-tax benefits, some employer benefit packages may include employer-provided subsidies. In addition, secure bicycle parking, lockers

and showers for those who ride to work are great incentives that employers may provide.

Merge is a carpool matching program through 511.org, formerly Bay Area Carpool, that allows people to find others with similar origins and destinations, and also provides rewards for trips.

Ride Amigos is a carpool matching and incentive platform that the SCTA is planning to launch in fall 2021 for people traveling in Sonoma County. The Ride Amigos program will include a pilot trip reduction program for State Route 37 commuters through a North Bay regional effort with targeted marketing and incentives.

Youth Education Programs

Safe Routes to School (SRTS) program in Sonoma County, is supported by the SCTA through Measure M and Federal funding and is implemented by the Sonoma County Bicycle Coalition. The mission is to encourage safe walking, biking and alternative transportation use for K-8 students. In the 2019-2020 school year, SRTS provided technical support and programming to 63 schools, including promotional resource kits, art contests, recommended book lists, and events. International Walk and Roll to School Day is an annual event produced by the SRTS Program that takes place in October, which encourages and educates students to safely walk and bike to and from school, and educates parents, school officials, and staff about the benefits of walking and biking to school. In 2007, 2129 students participated in the Sonoma County event, and in 2019, 7689 students participated, an increase of nearly 260%.

Utilizing the knowledge and skills of the Sonoma County Bicycle Coalition, the SRTS program also hosts bicycle and pedestrian safety classes, including on-bicycle "Rodeos" where kids and families are taught how to safely ride their bicycles on streets. In a typical school year, close to 20,000 Sonoma County students are reached with SRTS encouragement and/or education programming or events. SRTS programs are designed to combat the dramatic drop, in the past generation, of the number of children who walk and bicycle to school. In 1969, nearly 50 percent of all children in the United States (and nearly 90 percent of those within a mile of school) walked or bicycled to school. Today, that number has plummeted to fewer than 15 percent. During the morning commute, driving to school represents 10-14 percent of traffic on the road.

Eco2School is a high school program, led by the Petaluma-based non-profit, Daily Acts, that provides students the opportunity to learn about and tackle climate issues through self-led projects. Cleaner and safer transportation has often become a focus for students and has led projects such as walkability audits, pathway creation and carpool programs. To continue the growth of students' innovation regarding transportation and climate, Eco2School provides scholarships and partners with Spare the Air Youth (STAY) to support students with micro-grants and Bay Area wide conferences like the YES conference,

which engages students throughout the Bay Area. Currently the program works with students in 16 of the 19 public high schools in Sonoma County and eventually plans to work with all 19. Throughout the school year 2018-2019, Eco2School hosted youth leadership training with 272 students, supported encouragement activities for shared transportation that reached 15,062 students in Sonoma County and as a result 18.2 fewer tons of CO2 were emitted.

College programs include subsidies for bus transit trips as well as education and encouragement. Both Sonoma State University (SSU) and Santa Rosa Junior College (SRJC) contribute to the free rides for college students program and actively work to engage students on transportation options available within the county. SRJC offers a carpool parking permit program which reduces the cost of a parking permit when purchased as a carpool group. SSU runs a low-cost bike rental program that allows students to rent a bicycle for a semester with the goal of encouraging bicycle usage throughout and around campus.

Both SSU and SRJC host transportation fairs where various transportation operators and community-based organizations share information about commuting options for students. Encouragement to engage in greener transportation options also occurs at on campus Earth Day and Bike to Work Day events, and the annual Climate Action Night at the SRJC.

Complementary Programs

Emergency Ride Home provides a safety net for anyone who works in Sonoma County and uses an alternative transportation option, such as carpooling, vanpooling, public transit, bicycling, or walking to get to work. The program will reimburse rides home in a taxi, TNC (e.g., Uber/Lyft), or other transit, in cases of a qualifying emergency.

Sonoma County Bicycle Coalition is an active non-profit that advocates and supports safe bicycle riding through various programs available for all ages. These programs include the Safe Routes to School program, Street Skills classes, bicycle repair classes and bike valeting at local events. SCBC also engages with the public through educational rides like the SebastoPedal and the Pool Noodle Ride and a women cycling group: Biker Chicks. The Coalition also began Bike Happy Hours, for people to connect and engage with one another through cycling, another friendly way to be exposed to the transportation form.

GoSonoma.org provides a one-stop-shop for all things mobility within Sonoma County. Resources for bicycling, walking, carpooling, and using transit are compiled within this website to make planning transportation around the county easier. It also provides links to various resources that will allow for following through with transportation forms like signing up for a vanpool.

511.org, SF Bay is a phone and web resource for transportation information, options, and tools. 511.org includes traffic, transit, carpool, vanpool, and bicycling information for the entire San Francisco Bay area.

Shared Micromobility programs provide access to short-term bicycle, scooter, or other micromobility, rentals in public locations. Bike share and scooter share are often used for short trips between key destinations, trips between transit hubs and work or school, tourism and recreation. The first bike share program in the county was

piloted in the City of Healdsburg from 2018 to 2020 with about 30 pedal bicycles.

Planning and development are underway for a bike share system of 300 shared electric assist bicycles (e-bikes) around and connecting to SMART stations in both Sonoma and Marin counties. This three-year pilot program is funded through a grant from the Metropolitan Transportation Commission (MTC) awarded jointly to SCTA and the Transportation Authority of Marin (TAM). Goals for the bike share pilot program include reducing the need for single-occupancy vehicle travel for short city-centered trips and through providing "first and last mile" connections to transit. The pilot program will deploy shared e-bikes at hubs around SMART stations, major bus transit hubs, and key central locations in the cities of Santa Rosa, Rohnert Park, Cotati, Petaluma, Novato, San Rafael, and Larkspur.

Supportive Policies

Vision Zero is a countywide safety initiative that aims to eliminate traffic injuries and deaths. The project was launched in 2020 through a partnership between the SCTA and the County of Sonoma's Department of Health Services. The product will be a plan that focuses on action-oriented strategies to reduce serious injuries and fatalities caused by traffic collisions, and improving health, quality of life, and economic vitality, particularly for low-income and disadvantaged communities. Traffic injuries and deaths disproportionately impact bicyclists and pedestrians; therefore, bicycle and pedestrian safety improvements are a significant part of the solution.

Parking management programs and policies can make a huge impact on lowering GHG emissions from the transportation system through compact development, and they can help preserve open space and agricultural land as our cities grow. GreenTRIP is a certification program through TransForm that works with developers and local jurisdictions to assess parking needs for new multi-family or mixed-use developments. The GreenTRIP program will analyze parking demand based on factors such as building type and size, geographic location and surrounding land uses, available transportation options, and will recommend appropriate parking levels along with vehicle trip reduction programs for local approval. With the reduction of required parking, new multi-family developments can offer more units which benefits the housing deficit present within the county.

TRANSPORTATION PROJECTS

One of the primary purposes of the CTP is to review the existing system and identify the transportation projects and programs that are needed to maintain and enhance the transportation system and make progress towards the vision and goals of the CTP. The CTP 2050 recommends advancing projects identified by local jurisdictions and transit operators, as well as by voters through the 2004 Measure M and 2020 Go Sonoma sales tax measures and the public outreach process of identifying transportation needs.

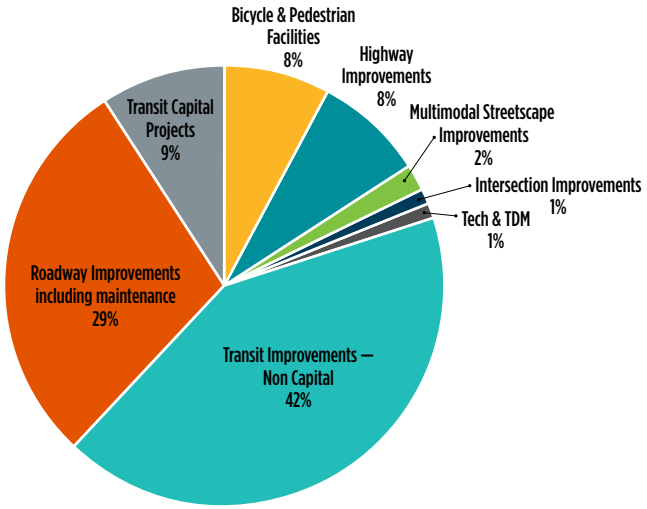
Local jurisdictions are responsible for most of the transportation infrastructure and recommend projects from their capital improvement plans for inclusion in the CTP. As part of this update, projects from previous plans have been reviewed, updated, or removed if they had been completed and/or no longer being actively pursued. The SCTA received project submissions for carry-over and new projects from all Sonoma County cities, the County, and local transit agencies.

Results of outreach, including that to Disadvantaged Communities have been shared with potential project sponsors (including the SCTA) and are incorporated into the project list.

Summary of Projects

A summary of all projects submitted as part of the CTP project list review and update is provided in Table 3-5. For the entire list of transportation projects see Appendix A-3. Included projects cover a variety of different modes of travel and are dispersed geographically throughout the cities and the County. A number of proposed projects are intended to address transportation issues such as traffic congestion or safety by expanding or improving the existing infrastructure. Other projects focus on maintaining the system.

TABLE 3-6. CTP PROJECT TYPE SUMMARY BY PERCENTAGE OF COSTS.



Several new project types have been used to categorize projects in this CTP:

- **Emission Reduction Technologies**: projects that are designed to reduce emissions from transportation.
- **ITS & New Technologies**: projects such as new transit fare payment technology or advanced traffic management systems that are designed to use technology to improve the performance of the transportation system.
- **Multimodal Streetscape Improvements**: projects that implement complete streets or other multimodal solutions to improve the transportation system for all modes.
- **Travel Demand Management**: projects that help reduce vehicle miles traveled such as the implementation of employer commute programs.

4.

MOVING FORWARD, MEETING OUR GOALS

There was a time when the goals of the CTP were limited to building or preserving transportation infrastructure and transit systems. Adequate funding was the key to success, and the struggle.

Over time the goals of the CTP have been expanded to include issues caused or solved by transportation. The goals for this CTP have been structured to consider a broader vision of the transportation system that includes systemic changes to travel behavior and transportation options and requires that people consider how their use of the transportation system impacts the environment. While Sonoma County residents still desire well-designed, well-maintained roads and buses, they also recognize the importance of creating connections between people and places, improving safety and public health, supporting thriving communities and places, and protecting our environment and climate.

2050 VISION AND GOALS

VISION — CONNECTING PEOPLE AND PLACES AS WE TRANSITION OUR TRANSPORTATION NETWORK TO ZERO-EMISSIONS BY 2050.

Our guiding principles are to improve **safety**, **equity**, and **quality of life**.

Our transportation system should be:

GOAL 1 — CONNECTED AND RELIABLE

Deliver a seamless network that allows people to use a variety of transportation types easily, affordably and dependably.

GOAL 2 — SAFE AND WELL-MAINTAINED

Provide safe and well-maintained transportation infrastructure.

GOAL 3 — COMMUNITY ORIENTED AND PLACE-BASED

Implement place-based transportation projects, tailored to urban, suburban, and rural communities that will improve local mobility.

GOAL 4 — ZERO-EMISSIONS

Provide zero-emission transportation opportunities that meet diverse community needs, improve health and enhance quality of life.

ASSESSING PERFORMANCE OF THE PROJECT LIST

The list of transportation projects in this plan represents a combination of existing needs that have yet to be funded and new projects, programs or strategies, many of which were discussed in Chapter 3. Most of the projects were submitted by the nine cities and County of Sonoma based on their transportation needs. An evaluation was conducted to determine how well the goals would be met if SCTA were able to fund the entire list of projects. To do that, a list of performance measures was used to evaluate the performance of the CTP in broad terms. Performance was evaluated for the system as a whole, not on a project level basis. Individual projects are analyzed by the sponsoring jurisdiction through the CEQA/NEPA process as part of the project development.

Quantifiable Metrics

Performance measures were identified that relate to each of the CTP goals, and as is shown in Table 4.1, many of these metrics can be applied to several of the goals.

TABLE 4.1 PERFORMANCE MEASURES FOR QUANTITATIVE GOALS

Performance Measure	Connected & Reliable	Safe and Well-Maintained	Community Oriented and Place-Based	Zero Emissions
System Condition and Safety				
Pavement Condition Index		x		
Transit Vehicle Revenue Hours	x	x		
Collision Rates		x		
Travel Efficiency				
Person Hours of Delay	x			
Peak Period Travel Time	x			
Travel Time	x	x		
Transit Use and Active Transportation				
Mode Share (Non-motorized)			x	x
Bicycle Facilities - Miles	x		x	x
Transit Revenue Hours	x		x	
Transit Ridership/Capita	x		x	
Equity and the Environment				
Average Household Travel Costs	x			
GHG Emissions				x
VMT			x	x
VMT/capita			x	x
VMT/job			x	x

CTP performance measures are based on industry best practices and performance measures used in previous plans and other plans in the region. More detailed information on the performance evaluation, which compares existing conditions to future conditions under the 2050 CTP, is included in Appendix 4.1 — CTP 2050 Performance Results.

Setting the context

All forecasts and future estimates are compared to a baseline year of 2015, which represents the most recent travel model validation year. Where available, more recent data from the Sonoma

County Travel Behavior Study and other sources were used to understand how conditions have changed since 2015.

> Travel model validation is the process used to ensure that the model adequately represents actual travel behavior and conditions. As part of the model validation process, model results are compared to real world travel data such as traffic counts, transit ridership, travel behavior data, and other data sources. The model is revised as necessary until it is able to adequately represent actual travel conditions.

The CTP scenario assumes that by 2050 all 279 CTP projects are funded and constructed or implemented. Population and employment growth are assumed to occur as currently directed in local general plans and more detailed area and specific plans and travel behavior stays the same as it is today for this analysis.

- **High level analysis:** The CTP has focused on evaluating system-wide or regional transportation performance. Individual projects have fractional impacts on the system and are measured as an entire suite of projects. Detailed analysis is conducted for projects as they are developed. Projects will be required to conduct appropriate environmental and equity analyses before they are implemented. The level of detail and type of analysis required is tied to the project type and size. Specific funding sources may also have analysis requirements.
- **Local agencies are planning for continued population and employment growth:** Sonoma County is expected to continue to grow in the future, and local jurisdictions are planning for this growth in their general plans and other local planning documents. Regional forecasts predict growth of over 30,000 additional households and 30,000 additional jobs in Sonoma County through 2050. Local general plans and other planning documents which guide future growth estimate growth capacity for over 40,000 additional housing units and over 100,000 additional jobs at plan buildout. Growth will significantly increase travel demand as more and more people use roads, trails, and the transit system. More efficient growth patterns, improved vehicle and transportation technologies, and project benefits will mitigate some future travel related impacts.
- **The Sonoma County transportation system is relatively mature:** Proposed changes to the Sonoma County transportation system are relatively minor and represent only a fraction of the total scope and value of the overall system. Because the countywide transportation system is largely built out and mature, capital projects have a limited impact on countywide performance. Many of the proposed capital projects and programs included in the CTP are focused on improving local, or corridor, transportation and circulation, and not on improving the regional transportation system as a whole.
- **Existing development patterns are the primary factors influencing countywide travel patterns and conditions:** The county is expected to continue to grow, but the countywide development pattern is relatively mature, and growth is constrained and guided by urban growth and city-centered growth mechanisms and policies. The location of existing population centers and employment locations determines where and how far people travel. Growth and

changes to the transportation system or policies will have some influence on this, but the existing development pattern and travel patterns are largely determined by existing development.

- **Travel demand model limitations:** The Sonoma County Travel Model, which has been used to analyze performance, is able to represent and analyze certain types of projects and policies well but is limited in how it is able to capture or represent the benefits of many programmatic and policy improvements. Large capital improvements, significant shifts in development patterns, changing vehicle efficiencies and fuel economies, and pricing policies are represented relatively well in the travel model and off-model post processing tools. It is difficult to represent and capture the benefits of many types of projects and improvements included in the plan using the tools available. These include smaller local projects (such as most bicycle and pedestrian projects), transportation projects (such as the countywide Vision Zero safety initiative), drastic changes in travel behavior or technologies, and many transportation policies.
- **Financial constraints:** The performance analysis has focused on all projects included in the comprehensive transportation plan. Many of these projects do not currently have identified funding sources. Additional funding will need to be secured to implement many of the projects included in the CTP.

PERFORMANCE RESULTS — CTP 2050

The performance assessment results indicate that some progress is trending in the right direction from 2015 into the future. These positive trends are:

- **Improved transit service coverage and transit ridership:** Both coverage/availability and use of the transit system increase:
  - » Transit vehicle revenue hours (transit availability) increase from 760 hours to 1365 hours.
  - » Transit ridership increases from 16,000 riders/day to 21,000 riders/day.
  - » Transit ridership/capita increases from 11.75 rides/year to 12.25 rides/year.
- **Expanded bicycle and pedestrian system and connectivity:** Local plans prioritize "city-centered" growth and walkable/bikeable communities. Average trip lengths are predicted to be lower. The non-motorized transportation network is planned to expand.
  - » Bicycle/pedestrian facility mileage planned to increase from 208 miles to 1066 miles.
- **Shorter trips:** Trip lengths are expected to get shorter in the future due to more efficiently planned development in general plans and other local planning documents.
  - » Average daily trip length predicted to decrease from 8.12 miles per trip to 7.84 per trip. Average trip length for work trips predicted to decrease from 13.83 miles per trip to 13.28 miles per trip.
- **Lower household travel costs:** The average percentage of household budgets spent on transportation is projected to go down slightly due mostly to more efficient future

travel patterns and lower average trip lengths.

  - » Average percentage of household income spent on transportation predicted to decrease from 22.1% to 21.6%.

- **Vehicle miles traveled and GHG emissions trend downward on a per capita basis:** Though total VMT is expected to increase, VMT per person, and total greenhouse gas emissions and GHG/capita are expected to decrease due to more efficient development patterns, CTP projects, and vehicle fuel efficiency improvements:
- VMT/capita predicted to decrease from 28.69 to 27.65.
- Total GHG emissions (CO2E) predicted to decrease from 1,833,804 to 1,340,933.
- GHG/capita predicted to decrease from 3.66 to 2.16.

The assessment highlighted a number of other challenges such as:

- **Continued reliance on automobiles:** Travel is expected to continue to rely on the automobile. Increased walking, biking, and transit use is anticipated to be offset by increased driving.
  - » The percentage of trips made using non-auto modes (8.5% of all trips) is predicted to stay the same in the future.
- **Increased traffic congestion and delay:** Average daily travel times are expected to decrease slightly in the future, but population and employment growth is expected to cause increased peak period congestion in the future.
  - » Daily hours lost due to congestion expected to increase by roughly 1/3 in the future.
  - » Hours lost due to congestion for each person each month is predicted to increase from 1.4 hours to 1.7 hours.
- **Significant maintenance needs and funding shortfalls:** Countywide pavement condition is in the "at risk" category and transit providers are facing historic budget shortfalls due to the 2020 pandemic. Much of the CTP project list is currently unfunded. Additional funding will be required to improve pavement condition, maintain and improve transit service, and implement important transportation projects and programs.

CTP analysis tools are not able to capture the safety benefits of the many safety projects included in the CTP project lists. The countywide Vision Zero project and many other local projects are specifically intended to improve safety in Sonoma County.

More detail on the CTP evaluation process is shown in Appendix 4.1. The CTP performance assessment is a system-level evaluation and some CTP projects, programs, or policies are difficult or impossible to analyze using the data and tools available. Examples include shoulder reconstruction and channelization, ADA improvements, and bridge replacement projects.

REACHING FURTHER — MEETING OUR GOALS

The CTP performance evaluation demonstrated some positive trends towards achieving the plan goals and objectives but continued to show a

lack of progress in important areas. Meeting the CTP Goals requires reaching further. Many of the strategies to meet the vision and goals overlap.

Making Equity a Priority

Transportation investments and improvements that provide travel options that are less costly than private automobiles have the potential to lower travel costs and benefit vulnerable communities. CTP performance analysis shows a small (.5%) decrease in household travel costs that can be attributed to planned growth patterns and CTP capital projects. Analysis indicated that reducing the number of trips each household makes, shortening trip lengths, shifting travel to biking/walking/transit, and encouraging more trip sharing could reduce travel costs further so that they would account for only 15 percent of an average household budget; down from 24 percent today.[1] To reduce travel costs and make transportation more affordable for Sonoma County residents, SCTA should prioritize and advocate for the following actions:

- Implement trip reduction programs such as tele-working, car/van-pools, and marketing non-auto travel.
- Encourage shifts to public transit by improving the frequency and coverage of the transit system especially for trips over 5 miles in length.
- Encourage shifts to non-motorized travel modes, like biking and walking, by improving travel safety and comfort. Strategies include providing a low stress bicycle network, increasing pedestrian connectivity and improving design at transit trip origins and destinations.
- Prioritize shifts to non-auto modes for trips under 5 miles and market the value of such an approach.
- Subsidize electric and other climate friendly vehicles and charging for lower income households.
- Shorten trip lengths by encouraging city-centered growth and by providing cost appropriate housing closer to job centers.

Transportation Pricing and Affordability

Travel demand reduction policies which seek to reduce single occupant vehicle travel by increasing transportation costs could significantly increase household travel costs if viable alternative transportation options are not available. Based on the CTP performance assessment, VMT or congestion fees could increase travel costs up to 35 percent of an average household budget and parking pricing policies could increase household travel costs up to 37 percent of the household budget. This increase from today's average cost of 24 percent of household budget, would represent an increase in average household travel costs of around $500 per month. Any pricing policy implemented should consider these impacts and develop strategies to provide support and/or subsidies for low and moderate income households to offset rising transportation costs.

Many strategies to reduce transportation costs align with the CTP goals. Policies to advance lower cost transportation options can also reduce VMT. Implementing means based tolling or bus

1 Center for Neighborhood Technology, 2015 estimate.

fares, free transit for students, incentives for e-bikes, and subsidies for low income households are examples of making transportation choices more attractive and affordable.

Meeting the Goals

Goal 1. Moving forward, what is required to make our transportation system better Connected and Reliable?

Providing more transportation options by improving the infrastructure and expanding transit service is the key to a seamless transportation network. The following actions will help us achieve this:

Eliminate gaps in bicycle and pedestrian network

- Implement Bicycle and Pedestrian Plans
- Create more Complete Streets projects

Make transit a better option than driving alone

- Increase service hours
  - » Provide late more night and weekend service
  - » Increase service frequency to reduce wait time
- Expand transit routes
  - » Implement Bus Rapid Transit on high use routes
  - » Expand service to more remote areas as needed
- Implement Transit plans

Focus on strategies that support high density, walkable and transit oriented communities.

- Support focused growth priorities and policies established by local jurisdictions through their general plans, regional participation in Plan Bay Area, Priority Development Areas (PDAs).
- Support forward thinking transportation improvements in high density, transit-oriented areas including, but not limited to, mobility hubs, slow streets, bus priority infrastructure, Class IV bike lanes, high-visibility crosswalks, and quick build demonstration projects.

Goal 2. Moving forward, what is required to make our transportation Safe and Well Maintained?

Implement Zero Vision policies

- Create a cross-disciplinary collaboration among local traffic planners and engineers, policymakers, and public health professionals to set clear strategies to achieve the shared goal of zero fatalities and severe injuries.
- Improve factors that contribute to safe mobility — including roadway design, speeds, behaviors, technology, and policies.

Employ Complete Street policies and strategies that support a diversity of uses.

- Support Complete Streets projects that improve safety and access for pedestrians, bicyclists, micromobility, public transit users, ride services, and drivers.
- Build upon adopted Complete Streets policies using examples of successful projects and lessons learned.

Target high-traffic areas with right sized solutions to improve access.

- Implement solutions that improve access and safety for all and fit the context of the facility such as:
  - » Traffic circles to improve traffic flow
  - » Bicycle and pedestrian bridges as alternatives to crossing high-volume on- and off-ramps
  - » Slow streets for high pedestrian traffic areas

Eliminate funding gaps in pavement maintenance to improve road conditions and keep them in good condition with routine maintenance.

- Maintain streets and roads to a higher level
- Keep shoulders cleared and maintained

Goal 3. Moving forward, what is required to make the transportation system Community Oriented and Place-Based?

Implementing place-based transportation projects, tailored to urban, suburban, and rural communities that will improve local mobility is central to project planning and design. Meeting this goal requires solutions that consider the context of the facility(ies) or system(s) and all of its users. The following actions will help us achieve this:

Target high-traffic areas with right sized solutions to improve access.

- Implement solutions to that improve access and safety for all and fit the context of the facility such as:
  - » Traffic circles improve intersection operations
  - » Bicycle and pedestrian bridges as alternates to crossing high-volume on- and off-ramps
  - » Slow streets for high pedestrian traffic areas

Focus on strategies that support high density, walkable and transit oriented communities. Support focused growth priorities and policies established by local jurisdictions through their general plans, regional participation in Plan Bay Area, Priority Development Areas (PDAs).

  - » Support forward thinking transportation improvements in high density, transit-oriented areas including, but not limited to, mobility hubs, slow streets, bus priority infrastructure, Class IV bike lanes, high-visibility crosswalks, and quick build demonstration projects.

Prioritize resilient infrastructure in areas at risk for flooding, fire and other environmental challenges.

- Support improvements to important facilities that mitigate hazards to human and harm to the local ecosystem.

Employ Complete Street policies and strategies that support a diversity of uses.

- Support Complete Streets projects that improve safety and access for pedestrians, bicyclists, micro-mobility, public transit users, ride services, and drivers.
- Build upon adopted Complete Streets policies using examples of successful projects and lessons learned.

Goal 4. Moving forward, what is required to meet the Zero Emission Goal?

Implementing the solutions outlined in *Shift Sonoma County* to achieve a zero-emission transportation network by 2050, we need to reduce emissions at a faster rate than envisioned in the 2016 CTP. The following actions will help us achieve this:

Prioritize transportation funding for zero-emissions strategies.

- Work with local and regional policy makers to integrate zero emissions goals into criteria for funding new transportation projects.
- Accelerate the adoption of zero emission vehicles by providing incentives with a focus on low-income communities.
- Develop a VMT mitigation bank with requirements that all projects funded by the mitigation bank meet established criteria to reduce emissions with preference given to zero emission strategies.

Emphasize strategies that incentivize transit and shared mobility.

- Secure funding to expand and sustain fare free programs.
- Research policies that support the deployment of autonomous transit vehicles such as downtown circulators or shuttles. Policies could include roadway space dedicated to autonomous transit, preferential curb space, and pricing.

Take bold steps to achieve a zero-emission transportation network.

- Implement pricing and parking policies that have resulted in measurable reductions in vehicle miles traveled in other jurisdictions such as:
  - » Congestion pricing
  - » Unbundle parking from all developments
  - » Eliminate free parking from activity centers (e.g., shopping, employment)
  - » Implement programs to offset impact of pricing policies on low income households
- Repurpose existing local streets and roads to allocate more space for bicycles, pedestrians, and micro mobility solutions. Reduce speed limits on all streets shared with bicycles and pedestrians to improve safety.
- Make all new streets complete streets.
- Implement policies that encourage adoption of smaller, autonomous, shared, all electric vehicles and discourage single occupant, privately owned autonomous vehicles.
- Advocate for changes to fuel taxes and other vehicle-related fees to dis-incentivize the use of fossil fuel vehicles and raise funding to support more sustainable mobility options.

Support climate-friendly land use practices through ongoing coordination and alignment.

- Work with local jurisdictions to integrate strategies that support zero-emissions goal into general plans, specific plans, and other planning processes.

- Support land use practices that increase density and focus growth in areas already served by transit.
- Support land use plans for walkable neighborhoods.

CLIMATE CHANGE AND TRANSPORTATION

On-road transportation (cars, motorcycles, trucks, and buses) accounted for almost 93 percent of all transportation sector GHG emissions in 2018. The majority of the remaining 7 percent consisted of emissions from off-road equipment such as airport ground support equipment. Less than 1 percent of total emissions were from the SMART commuter rail system which began service in 2017.

Between the greenhouse gas inventory base year of 1990 and the 2018 inventory, total county population increased by 29 percent and vehicle miles traveled per capita increased 18 percent. During the same time period major improvements were made in vehicle fuel efficiency. The vehicle fleet shifted toward hybrid, plug-in hybrid, and battery electric vehicles. Per capita greenhouse gas emissions from on-road transportation decreased by 14 percent. While the drop in per capita emissions is promising, and shows that reductions can be made, it also demonstrates that there is still much more that needs to be done.

CTP Projects and GHG reduction

The performance of the CTP is based on the effectiveness of the transportation projects submitted by the jurisdictions. However, it is clear in this analysis and in analysis done by other agencies (including by MTC in Plan Bay Area) that maintaining and enhancing the transportation system, even if it could be fully funded, is only a part of the solution. The addition of land use policies to densify cities, changes to travel behavior and shifts to active modes of transportation, and the elimination of fossil fuels from vehicles are also essential.

Shift Sonoma County Low Carbon Transportation Plan (Shift)

The Shift Sonoma County Low Carbon Transportation Plan (Shift),[2] adopted by the Sonoma County Transportation Authority Board in 2018, contains two high level strategies that can be implemented locally — Mode Shift and Fuel Shift. Mode shift strategies are intended to shift travel to efficient and clean travel modes such as walking and biking, encourage shared and active commute modes, and fuel shift strategies seek to improve the efficiency of vehicles still on the road by prioritizing shifts to electric and other clean vehicle technologies. Mode shift solutions build upon and maximize the benefit of ongoing transportation and concentrated land use development efforts. Each strategy defined goals and corresponding transportation solutions as described in Table 4.2.

2 SCTA/RCPA Shift Sonoma County Low Carbon Transportation Plan, https://scta.ca.gov/planning/shift/

TABLE 4.2 SHIFT SONOMA COUNTY STRATEGIES

Strategy	Goals	Solutions
Mode Shift	• Reduce per capita vehicles miles traveled (VMT). • Shift single occupant vehicle trips to biking or walking. • Increase transit ridership. • Reduce average household travel costs.	• Transportation demand management • Bike share • Car share
Fuel Shift[3]	• Eliminate countywide petroleum use. • Increase use of electric vehicles. • Increase number of charging stations. • Increase access to electric transportation options in low-income households and Equity Priority Communities. • Continue municipal leadership through integration of EVs into fleets and installation of workplace and publicly accessible charging at government facilities	• Increased EV adoption • Expanded EV charging infrastructure

Shift Progress

Since the adoption of Shift, SCTA and RCPA have implemented a number of the strategies outlined in the plan, including:

- Completed a car share pilot
- Launched an online knowledge base for common EV questions[4]
- Increased local government and workplace EV awareness
- Updated EV charging station guidelines
- Supported streamlined EV charging station permitting
- Refined existing EV charging station siting analysis
- Implemented a clean commute program for County of Sonoma employees
- Established a county-wide emergency ride home program[5]
- Completed planning for the launch of a bikeshare pilot that will be implemented near SMART stations in Marin and Sonoma counties in 2021
- Local transit operators began deploying new electric buses and the development of the necessary charging infrastructure
- Multiple sections of the SMART pathway were completed as were several other important bicycle and pedestrian facilities
- Transit operators rolled out fare free programs and modified routes to increase ridership

For strategies beyond Shift please see the GHG Reducing Strategies Matrix in Appendix 4.3, that includes implementation time frame, responsible party and outstanding needs.

3 For more details on electrification of vehicles countywide see Appendix 4.3 — Transportation Electrification.
4 https://ev101.helpscoutdocs.com/
5 www.scta.ca.gov/ERH

Transportation and Land Use

Local governments are increasingly committed to integrating land use planning and transportation investment decisions that support the use of transit, walking or biking. Sonoma County has been engaged in planning for sustainable growth for decades to reduce sprawl, traffic and air pollution, and to promote healthy, active living. Urban Growth Boundaries (UGBs) have been in effect in Sonoma County for decades and have helped prevent sprawl and protect natural and working lands from development. This tool has been successful in promoting city infill and is helping direct development into areas where higher densities are appropriate.

Land use planning that emphasizes more compact development in support of walkable neighborhoods and shorter vehicle trips is essential to reducing GHG emissions in transportation.

SCTA produced the Priority Development Area (PDA) Investment and Growth Strategy[6] as a tool to help the agency integrate land use planning with transportation programming decisions in Sonoma County over time. PDAs are places near public transit where future growth should be focused including new homes, jobs and community amenities. By bringing transit, jobs and housing together in downtowns, along main streets and around rail stations, PDAs help reduce greenhouse gas emissions and help address the housing crisis.

State Legislation

The need for integrated land use and transportation planning acquired new urgency upon passage of a number of landmark pieces of state legislation that mandate reductions in greenhouse gas emissions:

- Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006 mandates a reduction in California's greenhouse gas emissions to 1990 levels by 2020.
- Senate Bill 32 (SB 32), the Global Warming Solution Act of 2006: emissions limit requires the California Air Resources Board to ensure the state's greenhouse gas emissions are reduced to 40 percent below 1990 levels by 2030.
- Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act of 2008 defines more concrete implementation requirements to achieve the emissions reductions expected from the land use sector under AB 32. SB 375 aims to reduce greenhouse gas emissions from passenger vehicles through better coordination between transportation investments and land use decisions.
- Senate Bill 743 (SB 743) became law in 2013, and strengthens the connection of transportation and land use by changing the way transportation impacts are measured for new development projects. The intent is for future development to be planned within established areas resulting in more compact communities and reducing the amount of driving required.

6 https://scta.ca.gov/wp-content/uploads/2017/05/PDA-IGS-2017-update.pdf

In 2013, California lawmakers approved SB 743, which fundamentally changes transportation impact analysis under CEQA. The law eliminates automobile delay or other similar measures of traffic congestion as a basis for determining significant environmental impacts and replaces it with analysis of vehicle miles traveled (VMT). In 2018, OPR completed an update to the CEQA Guidelines to implement SB 743. The Guidelines state that VMT must be the metric used to determine significant transportation impacts. This requirement went into effect on July 1, 2020.

The change to VMT aligns transportation impact analysis and mitigation with State and local goals to reduce greenhouse gas emissions, streamline development in currently built-up areas, promote city-centered growth, and to reduce travel related environmental impacts on our communities. Mitigating VMT impacts involves different types of actions than would be implemented to mitigate a LOS impact. VMT mitigation will require actions that reduce the number or the length of vehicle trips generated by a project. Possible mitigations may include locating the project closer to public transit facilities, changing the project's characteristics to include a broader mix of complementary land uses, requiring that it provide amenities to support bicycling and walking, or adopting paid parking.

FUNDING CHALLENGES

Road maintenance and infrastructure improvements including intersection improvements, signalization, shoulder widening, and additional bike lanes, all essential for a safe and well-maintained transportation system, are underfunded. Likewise, there is a deficit of funding for transit. While there is identified funding to maintain current transit operations, the need is much greater to provide the level of service required to make transit a viable option for more trips in more locations.

The list of transportation needs submitted for this CTP totals over $10 billion for 30 years.

PROJECT TYPE	$M
Transit Improvements — Non Capital	$4,220
Roadway Improvements (including maintenance)	$2,914
Transit Capital Projects	$876
Bicycle and Pedestrian Facilities	$846
Highway Improvements	$785
Multimodal Streetscape Improvements	$162
Intersection Improvements	$123
ITS & New Technologies	$80
Emission Reduction Technologies	$6
Travel Demand Management	$3

Revenue projections over same the 30-year time period total $6.7 billion to maintain the existing systems (including $2.1 billion to keep the transit system running as it is today) and deliver new programs and projects, leaving a shortfall of $3.3 billion, of which $1.5 billion is in transit expansion and $1.2 billion is in road maintenance.

Transportation funding comes from a mix of federal, State and local sources, and is overlayed with criteria for how, when and by whom it can be used. Difficult funding challenges arise when decision-makers are faced with having to choose between maintenance and expansion — be it for roadways, transit operations or bike and pedestrian facilities. An added complexity is that project sponsors must try to match various fund sources and their requirements with a variety of

competing needs. SCTA distributes funds to the County and cities according to the requirements of the fund source and monitors the use of funds and project delivery.

The system of funding transportation is complicated and cumbersome due in large part to ever evolving policies and priorities that seek to meet the demands of varying interests and concerns related to transportation improvements. This has sometimes led to restricting funds to specific kinds of projects (e.g., safety or bridge rehabilitation) or specific modes of travel. Some key points to keep in mind about existing transportation funds include:

- Funds are often dedicated to specific uses, e.g., gas tax funds cannot be used to pay for the operation of a new bus route.
- Some funds are automatically apportioned through formulas to various recipients, whereas some programs require project sponsors to compete for limited funds.
- Most funding mechanisms do not automatically change due to inflation in prices and thus often do not keep up with the cost of doing business. For example, the cost of fuel for busses is volatile, yet transit operators strive to provide consistent service with inconsistent revenues.
- Virtually all funding sources for transportation are "matching programs" in that they do not fully fund a project and require contributions from other sources. This process, known as leveraging, means that local funds can be substantially expanded when combined with state and federal funds. For example, a program with a 25 percent local match means that every dollar of local money can produce up to three dollars of other money that needs to be obtained. In order to be competitive, it is often necessary to provide an even greater match. SCTA's policy has been to try to maximize the leveraging of federal, State, and regional funds wherever possible. The downside to this overarching approach is that projects end up being funded by numerous sources and if one of those were to decline or become unavailable the whole project is put at risk.
- As the transportation system ages, it grows more costly to maintain. Deferred maintenance often leads to short term savings, but in the longer term increases in costs.

For more details on transportation funding see Appendix 4.3.

HOW SCTA WILL IMPLEMENT THE 2050 CTP

SCTA will implement the 2050 CTP through planning, funding, project delivery and advocacy. Strong partnerships will be required to advance policies that support the vision and goals, and make progress on key policy topics that support safe walking and biking, increase transit access and expansion, and advance equity in all aspects of the transportation system.

Plan

SCTA will use short-, medium-, and long-range strategies to refine and expand on the recommendation of the 2050 CTP. These plans include Vision Zero Action Plan and the upcoming Active Transportation Plan to advance key policy topics, guide decision-making, and be responsive to current and future trends.

Advocate And Partner — Legislative Program

Many strategies will require partnerships and advocacy locally and at the state and federal levels. The legislative program establishes funding, regulatory, and administrative principles to track regional, state, and federal policy issues and to guide legislative advocacy.

Fund — CTP Project List

SCTA prioritizes projects listed in the 2050 CTP when it allocates the local transportation sales tax measure as well as federal, state and regional funds under the agency's purview.

Deliver — Project Delivery

SCTA will deliver some projects as the project sponsor. SCTA advances and delivers these projects in close collaboration with partner agencies by leveraging local funding with significant regional, state, and federal money.

Looking Ahead

Agencies in Sonoma County are embarking on delivering the next generation of transportation projects for communities that are more nimble and innovative and more creatively place people at the center of design and services. The recommendations in this CTP chart the course for the future, with eyes on the horizon for a vibrant and livable Sonoma County in 2050.

APPENDICES

A-1.1 Community Voices

Community input plays a key role in developing a successful comprehensive transportation plan. In order to develop the Moving Forward 2050 plan, the SCTA team developed numerous opportunities to gather community feedback and discuss transportation needs with residents and local interest groups.

In designing outreach, the goals were to:

- Provide multiple channels for a broad number of communities and stakeholders to share input on transportation needs and potential projects to be included in the plan.
- Work towards broad consensus as to what the problems are related to transportation and transit in disadvantaged communities and what the best solutions to these problems are.
- Involve residents and community organizations in analyzing and shaping the recommendations in the plan.

The outreach for the Moving Forward 2050 builds off of a history of developing Community-Based Transportation Plans (CBTPs) in Sonoma County. As part of the outreach planning, there were several communities highlighted for additional outreach:

- Latinos
- Seniors
- Families
- Indigenous communities
- Recent immigrants
- Youth
- Other low income and disadvantaged communities

ACTIVITIES

Outreach for the plan began with a transportation needs assessment. This assessment helps to clarify existing transportation conditions in communities, including the most important problems and needs. The first events were a series of community listening sessions where feedback was solicited from a number of the communities highlighted for additional outreach.

Steering Committee for Under-represented Community Outreach

SCTA staff convened the CBTP Steering Committee at the end of Outreach Phase 1 on October 3, 2019 in order to discuss the full summary and survey analysis. The steering committee is comprised of representatives from the local CBOs we contracted to help develop and implement our outreach to Sonoma County communities who have been systemically disadvantaged. The members are:

- Susan Garcia, Center for Well-Being
- Vince Harper, Community Action Partnership
- Xulio Soriano, North Bay Organizing Partnership
- Renee Tolliver, Council on Aging

The committee reviewed the draft outreach summary and discussed framing, terminology and whether any major points were missing. Staff led the committee in reviewing the summary and found broad agreement for each of the summarized points, with two additions. The committee discussed using the term “indigenous communities” instead of “native american tribes” because it takes into account indigenous peoples from

central and south America who have relocated to Sonoma County.

The committee also recommended adding a new point that summarizes comments about the lack of regional public transit routes between counties. The committee members agreed that many participants complained that there were few public transit options to travel to neighboring counties or move between communities off of the Highway 101 corridor.

Listening Session with under-represented communities

The team held 12 meetings across Sonoma County with 110 attendees. Staff has worked together with four CBOs to gather feedback directly from under-represented communities: the Center for Wellbeing, Community Action Partnership, the Council on Aging and the North Bay Organizing Project. To follow is a summary, for more details about the CBO engagement see Appendix A-1.2.

Themes

The in-person listening sessions and online survey responses covered a wide-ranging number of issues and possible solutions. The main issues are categorized within the transportation issues explored during the listening sessions and online survey:

Cost

Transit should be free for everyone or made available at a reduced cost for youth and elderly — A number of responses addressed the need for reducing the cost of transit by either making transit free for all or providing significant discounts for youth and older adults. Many responses also noted that the SMART train is too expensive.

> *"Public transportation is key to environmental protection and to reducing the cost of living that is endangering our economy."*

> *"We depend on convenience when we transport ourselves and others to our destinations. The facts are that when I have to wait over an hour for a SMART train, instead I drive. I have to walk a mile with luggage or take Uber from the SMART train airport stop to the Santa Rosa Airport, thus I drive."*

Time

Round trip transit trips take too much time — Many respondents said they declined to use transit because the trip time was not competitive with driving.

> *"Buses do not run frequently and are therefore useless unless one has no other option. I'd call Uber before I'd wait an hour for a bus or 1.5 hours for the train."*

Elderly do not have enough stamina to be out of the house long enough to take transit — Many older adults responded that taking transit or paratransit required multiple trips that would require them to time their medication and be out of the house for longer than they felt comfortable.

Most everyone uses a car and gets stuck in traffic because there are few other options — Many respondents felt that private automobiles were the only logical choice for making their trips, while also complaining that many roads and intersections were unsafe and congested due to the number of other people driving private vehicles.

Maintenance

Potholes are an issue and damage cars — A number of respondents complained about damage to their cars and the difficulty of biking due to the state of the roads.

Sidewalks and streets need to be better maintained for walking and biking — Many responses

pointed out specific roads or sections of a trip where a sidewalk was missing. They also pointed out areas where the road was too narrow to safely accommodate both cars and cyclists.

Accessibility

Bus drivers don't speak Spanish — Many Spanish-speakers expressed having a difficult time with bus drivers who did not speak Spanish. Many of them felt the drivers grew frustrated when they couldn't communicate.

> *"There is a significant need for Spanish-speaking bus drivers. All bus drivers should be bilingual and the receptionist at bus station terminals should be bilingual at all times."*

Other transportation information only in English — A number of Spanish speakers expressed hesitancy about using transit and there was rarely and information in Spanish on using the transit system.

Safety

Not enough space on streets reserved for bikes — Many respondents suggested that separated bicycle lanes or paths be constructed to make cyclists feel safer.

> *"Bicycle lanes should be separated from traffic. The local plan for most bicycle lanes is horrific and accidents are unavoidable."*

Lack of lighting around bus stops and frequency of service at night — Many transit riders expressed fear of taking transit at night due to unlit bus stops and long waits that exposed them to cat-calls and unwanted attention.

Increased Investment

Perceived gap in transportation investments compared to other communities — Many participants highlighted a need to increase the investment in the transportation system with new projects or programs, such as new scooter share or increased highway roadway capacity.

> *"To encourage more biking, walking, skateboarding, make a program like they have in LA, where you can rent a scooter or bike and return it to any docking location." — Northeast Santa Rosa resident*

Lack of regional public transit routes between counties — Many participants complained that there were few public transit options to travel to neighboring counties or move between communities off of the Highway 101 corridor:

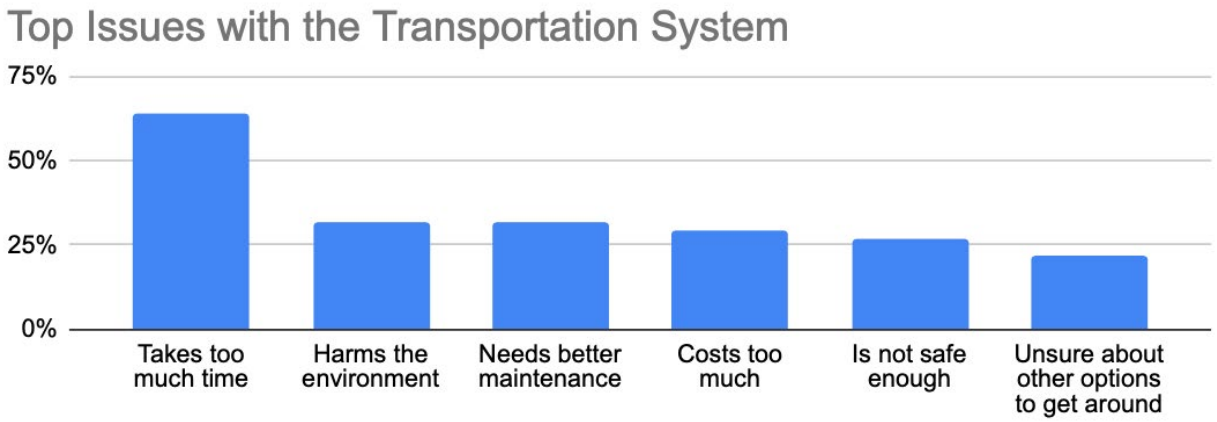
> *"Why is there no way to get from Sonoma County to Amtrak, BART, or Napa? We need better region- al support and an East/West transit plan. There is life beyond the 101 corridor." — Glen Ellen resident*

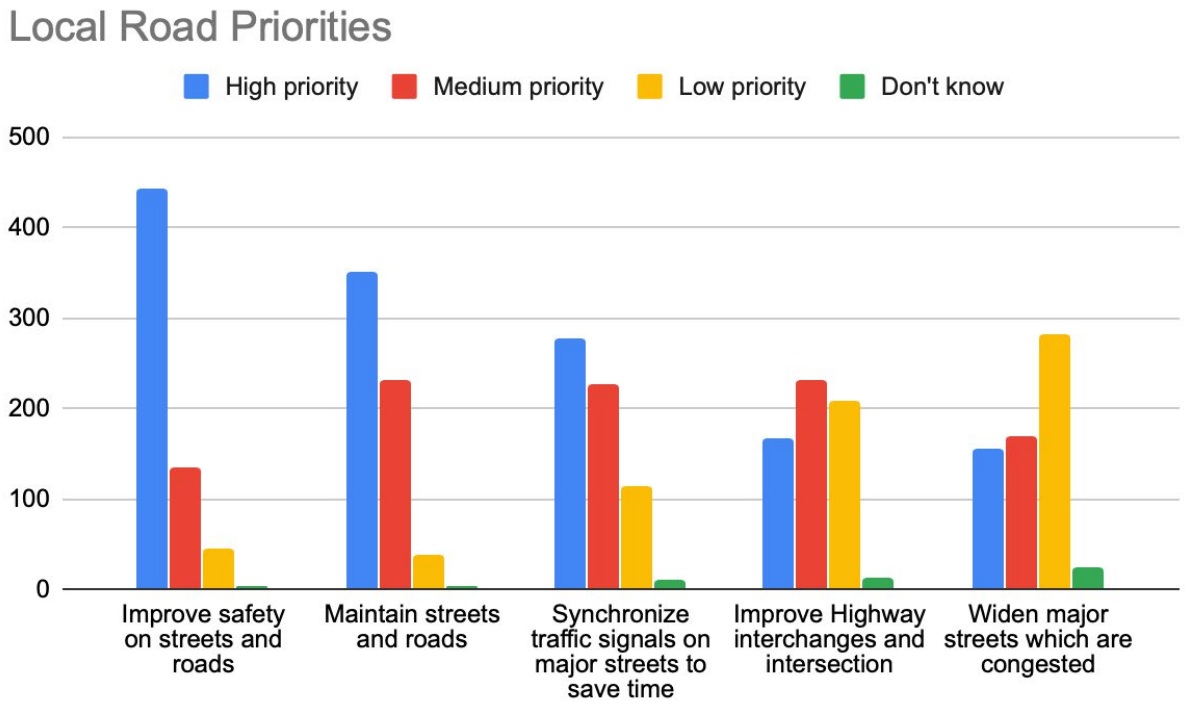
SURVEY

The SCTA released a transportation needs survey on July 31, 2019 and collected responses through May 1, 2020 for this summary. Staff collected responses online, through a Placespeak engagement page as well as through links to the identical survey shared through Typeform. The online survey was available in English and Spanish.

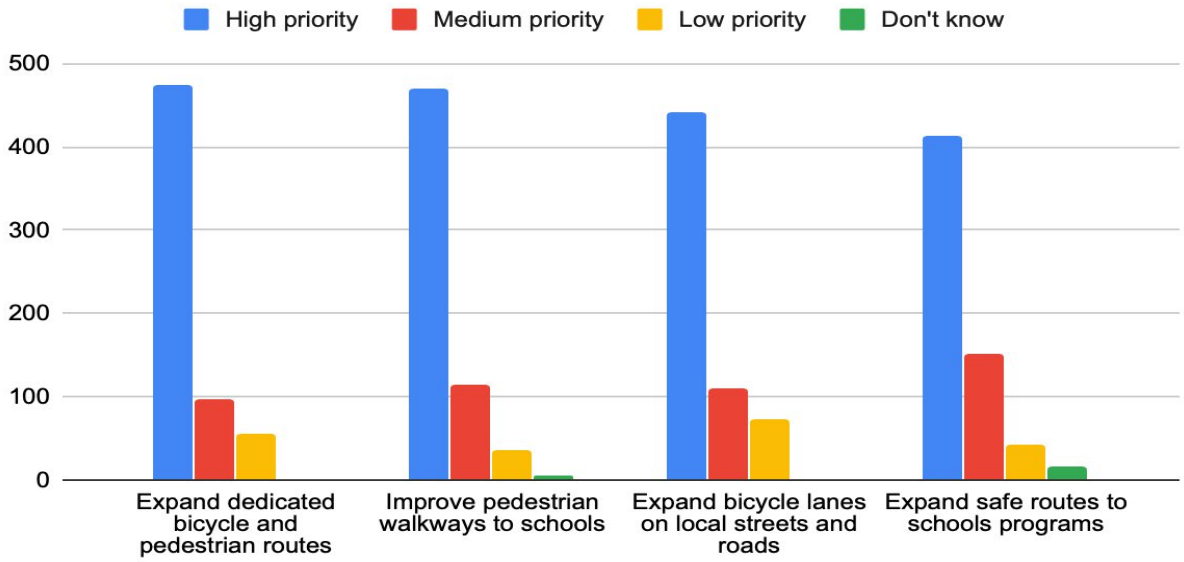
Staff also collected survey results at the 12 listening sessions hosted by community-based organizations throughout Sonoma County. Participants completed the paper surveys in either English or Spanish. Meeting facilitators aided with completing the surveys as needed.

In total, over 600 responses were received for the Transportation Needs Survey. The results are summarized below:

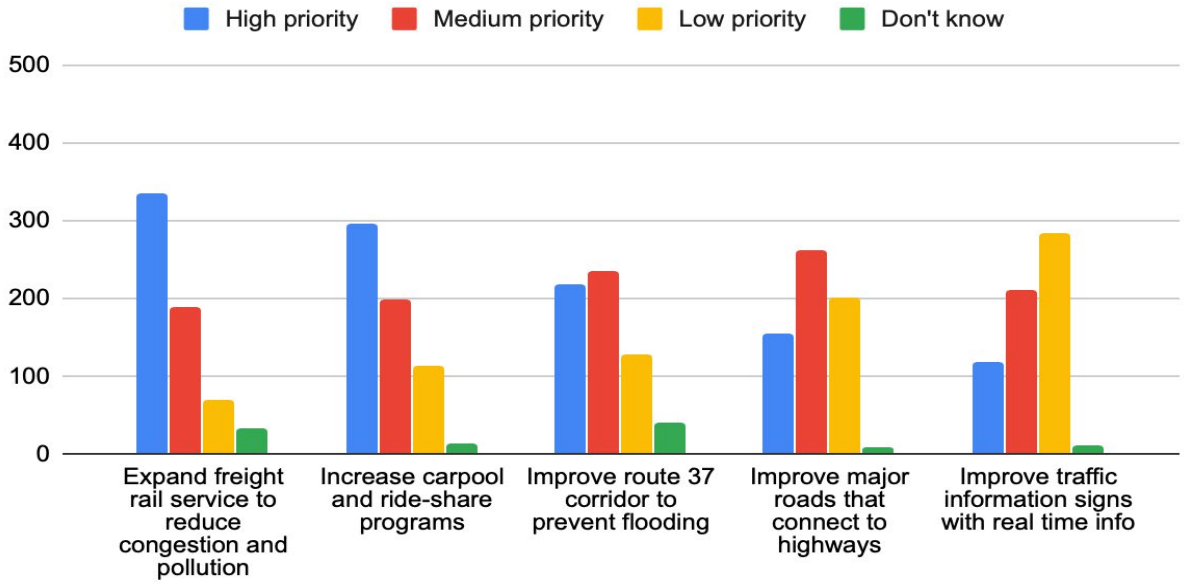

Top Issues with the Transportation System
75%
50%
25%
0%
Takes too much time
Harms the environment
Needs better maintenance
Costs too much
Is not safe enough
Unsure about other options to get around

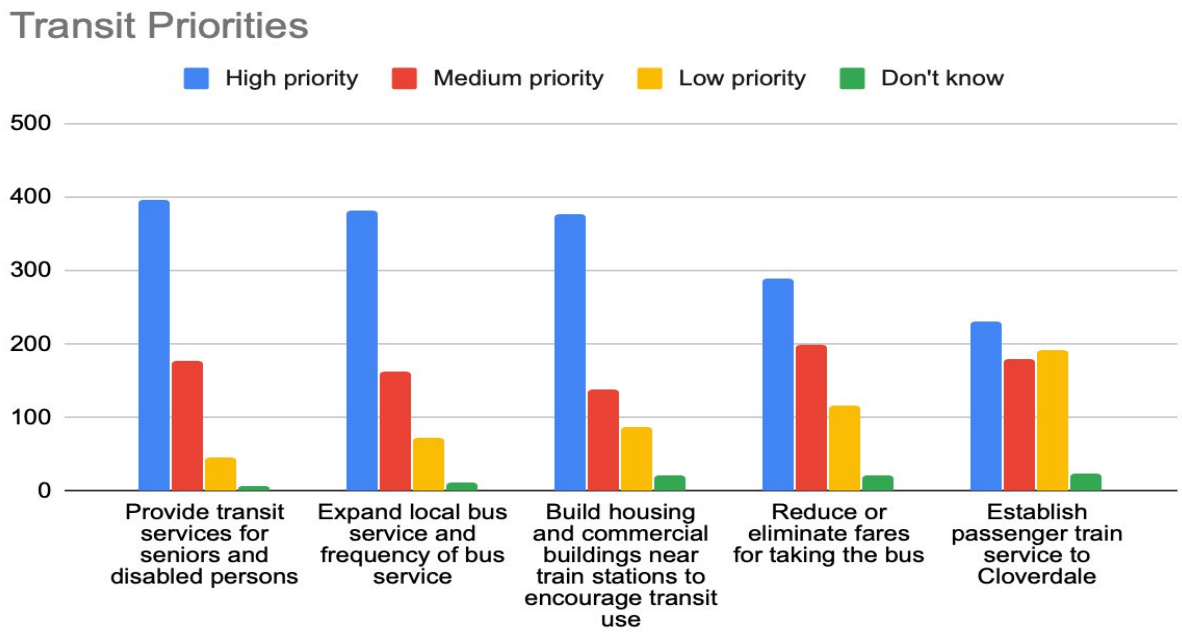

Local Road Priorities
High priority
Medium priority
Low priority
Don't know
500
400
300
200
100
0
Improve safety on streets and roads
Maintain streets and roads
Synchronize traffic signals on major streets to save time
Improve Highway interchanges and intersection
Widen major streets which are congested

Bicycle Piorities



Highway Priorities





PUBLIC MEETINGS

In the Fall and Winter of 2019, SCTA staff hosted public listening sessions to collect additional in-person information and engage with the public on the CTP. Staff held the meetings during the early evenings at public libraries and coordinated with community groups to promote the events.

- Santa Rosa, 11/6/19
- Petaluma, 12/4/19
- Sonoma, 12/11/19
- Windsor, 12/16/19

Themes

Concern about ability to bike and walk as a form of transportation

Many attendees were interested in biking or walking more, but had concerns about safety and the usefulness of existing accommodations.

"Bicycling and pedestrian safety is a major issue as drivers don't pay attention to pedestrians."
— Petaluma Resident

"It's not safe to bike or walk under the freeway, especially for kids and when it's dark. Particularly where cars turn left off of southbound offramp."
— Windsor resident

"Need to connect bike trails to where you actually want to go."
— Sonoma resident

Transit is not an accessible solution for most people

Many attendees were interested in using public transit more, but believed it would be hard to replace car trips with transit trips.

"Have never taken the bus, but would consider if it ran more frequently."
— Sonoma resident

"People are so used to using their cars that they aren't aware of transit."
— Petaluma Resident

Concern about adapting our transportation system to changing conditions

Many attendees expressed concerns about impacts to the transportation system due to climate change.

"It's only getting warmer, we have to figure out how to support active transportation with greater heat."
— Windsor resident

"During the evacuation it took two hours to leave town."
— Windsor resident

Need to continue improving road conditions

Many attendees expressed the need to continue improving road condition.

"Petaluma has the worst roads in the county and this slows people down."
— Petaluma resident

"The quality of the roads goes down around harvest season."
— Windsor resident

Webinars

The team hosted a series of informative webinars developed for local staff, elected representatives and engaged members of the public. Staff developed webinars that unpack the CTP process and explain the work done at the SCTA. The webinars also provided a next step in public engagement from the transportation needs assessment.

- 10/23/19 — Sonoma County's Travel Model
- 12/10/19 — Potholes and Pavement
- 1/22/20 — Vision Zero, Making Streets Safer
- 2/27/20 — Future of Public Transit in Sonoma County
- 4/29/20 — A Future With Less Driving

Presentations are available at scta.ca.gov/2050

Other Meeting

Presentations were made to a number of service clubs and advocacy organizations including the Cloverdale Rotary (9/7/2019) and the Sonoma County Land Use Coalition (7/8/2020).

Partner Outreach

A number of partner organizations have conducted outreach on issues related to transportation over the same time period. The conclusions of this outreach will be included in the final draft of the Moving Forward 2050 Plan. Initial summaries of the outreach are presented below:

Vision Zero

The SCTA is currently collaborating with the Sonoma County Department of Health Services on the Vision Zero project that will focus on action-oriented strategies to reduce serious injuries and fatalities caused by traffic collisions. The Vision Zero team launched a survey in August 2020 and published preliminary results in November 2020 that included information on the top barriers to walking and biking more:

What are the barriers that prevent you from walking or biking more?	Count
Driving is more practical because I have too many things to carry, multiple stops to make, and/or children who need to travel with me	351
I live too far from the places I need to go	296
I do not feel safe and I worry about getting hit by a vehicle	251
The sidewalks/bike lanes along my route are missing or in poor condition	227
Walking and biking take longer and I do not have the time	98
I do not want to arrive to my destination sweaty, or there are no shower facilities at my work	66
I am concered about harrassment/violence from strangers or the police	43
My bike is not working or I do not have a bike	37
I am physically unable to walk or bike	23
I do not like to walk or bike	10

Go Sonoma polling

The SCTA conducted a statistically valid poll in October 2019 that measured support for a number of urgent issues in the following order:

- Repair potholes — 83%
- Reduce traffic congestion on local roads and highways — 76%
- Make local roads and highways safer — 75%
- Improve evacuation and emergency road access — 74%
- Enhance transportation for seniors, veterans and people with disabilities — 73%
- Make walking and biking safer — 71%
- Reduce GHG emissions — 69%

A-1.2 Community Based Organizations (CBOs)

Listening Sessions — Details

OVERVIEW

SCTA conducted the first phase of outreach for the Comprehensive Transportation Plan (CTP) in July, August and September 2019. The focus was on working with residents and community based organizations (CBOs) to determine transportation needs in Sonoma County. MTC requested that special effort is taken to reach community members who are often under-represented — such as seniors, youth, Latinos, recent immigrants, and other low income or disadvantaged communities.

Staff has worked together with four CBOs to gather feedback directly from under-represented communities: the Center for Wellbeing, Community Action Partnership, the Council on Aging and the North Bay Organizing Project. The team held **12** meetings across Sonoma County with **110** attendees. In addition, SCTA staff has released a survey to gauge transportation needs, with over **235** responses received to date.

Communities highlighted for additional outreach:

- Latinos
- Seniors
- Families
- Native American tribes
- Recent immigrants
- Youth
- Low income and disadvantaged communities

Activities

SCTA staff and partner organizations held many in-person meetings in order to solicit feedback directly from community members. These include:

Events	Location	Date
Community Health Worker Meeting	Santa Rosa	7/18/2019
Roseland Community Building Initiative meeting	Roseland	7/25/2019
Youth Civic Engagement Project leadership team	Santa Rosa	7/25/2019
SCTA Citizen's Advisory Committee	Santa Rosa	7/29/2019
Southwest Santa Rosa Health Action Chapter	Santa Rosa	8/7/2019
Chatino community — house meeting	Petaluma	8/10/2019
African American Community Leaders	Santa Rosa	8/15/2019
Council on Aging	Santa Rosa	8/15/2019
Bayer Farm Potluck	Santa Rosa	8/16/2019
Latino Service Providers	Windsor	8/17/2019
Graton Day Labor Center	Graton	8/20/2019
Petaluma Senior Café	Petaluma	8/27/2019

1 — COMMUNITY HEALTH WORKER MEETING

Date and time: 7/18/2019, 6:30pm–7:30pm

Location: 101 Brookwood Ave,
Santa Rosa, CA 95404

Facilitator: Susan Garcia, Center for Wellbeing

Attendees: 6

Typical daily trips for attendees:

- Mostly everyone uses a car as a mean of transportation to get to work and get children to school.
- Some of the participants have to take alternative roads due to traffic or the roads being too narrow. (Mooreland Neighborhood Sited as one of these areas)
- Carpool helps a lot with getting to places faster, especially during the morning around 7:00 AM.
- During the weekend and during holidays there's more traffic than the usual. It seems as if everyone picks the same time to drive, which is usually later in the evenings.

Transportation System Issues:

Needs better maintenance

- There's a lot of maintenance that needs to be done
- Roads are bad, which cause even more traffic during the morning rush hour (7 to 9 am) and (3-5pm) when everyone tends to go to work or get off work. Especially on the roads around Burbank Avenue.
- There are a lot of traffic lights broken or none at all where they are needed. One specific area would be here on College Avenue, where there a lot of crosswalks for pedestrians, but no actual warning lights for them to cross, which often times causes cars to brake hard and puts the lives in danger of the actual pedestrians.
- Sidewalks in the areas of Corby and Barham Avenue need a lot of maintenance.

Costs too much

- The cost of gas is high and when there is traffic, the gas is used faster because we're driving slowly and making too many stops. This makes the amount of money spent on gas go up.
- Some of the participants have to drive more than usual because they have to take alternative roads to avoid traffic. Sometimes because the roads have no maintenance or are too narrow.
- Everyone agrees that it costs too much to use the transportation system.

Is not safe enough

- Safety is big concern especially in areas where there are no crosswalk warning lights or no signs signaling what's ahead. The main concern is their family's safety especially on the highway roads. One participant shared about her experience with Highway 101 and how there isn't enough time to change lanes because of the traffic or missing signs.
- There needs to be more patrolling or traffic cameras in the West End Neighborhood. One time a driver was stopped at a stop sign and then the other driver pulled in front

and started to make circles around them, it made the driver feel very unsafe.

- The 101 Freeway exit Todd Road heading south, where there is not actual stretch of lane for cars to merge. Makes it so that ongoing traffic heading south have to stop abruptly.
- The Santa Rosa exit heading North where both the intersection of Hwy 12 and North 101 meet to take the Santa Rosa Exit is also very complicated as there have been numerous almost accidents from having to change lanes just to take the exit or to merge on Hwy 101 North.
- Not enough lane space if you are using CA12 to get on to US101 North or US 101 South.
- The exit ramp heading to Sonoma Ave HWY 12 from US 101 North is also very terrible. The person living in that corner house has had numerous cars crash into her yard and this person and her family are in fear of their safety as there is no barrier between her house and that exit ramp. They feel as though the next time a car crashes it might actually crash into their house.
- There needs to be more maintenance in Roseland (South West Santa Rosa), especially on Corby Ave and Barham Avenue in the Moorland Neighborhood.
- There are bus stops with no shade and sometimes no place to sit while waiting.
- The sidewalks are often narrow or there is no sidewalk at all.
- Recently, there have been many accidents with the train so they consider it somewhat dangerous.
- The bar will go down and then immediately go up again. There are concerns about possible accidents that this can cause since it is unexpected. Drivers are unaware about when exactly the train will be crossing.
- However, trains are good for fieldtrips but there needs to be more rules implemented to make it safer.
- The sidewalks are small and the street signs are old. There is a need for new signs.
- There are no lights to cross, which makes a dangerous to cross the road.
- There are a lot of cars that will block the driveway which makes it hard and dangerous for people to cross the road.
- Perhaps there is a need for more parking restrictions, so the sidewalks are not blocked and cause blind spots for cars getting out of a street or sidewalk. Also, more paint signs on the roads will be beneficial.
- It's dangerous to bike most of the time because some roads are not wide enough. Also, some bicyclists get really close to your car which makes it dangerous when there is traffic because it's harder to switch lanes.
- Not enough space for bicycles.
- The area of by West Side in Healdsburg, River Road and Guerneville Road have a lot of bicyclists, but not enough road for both a car and a bicyclist to fit. There are so many curves and when motorists try to avoid the bicyclists and can lead them into oncoming traffic, which is very dangerous. We need more bike signs.
- Rules for bicyclists need to be enforced.

- Motorcycles don't follow rules. Some motorcycles will drive past or next to drivers. It will help if rules are also enforced.
- There needs to be more signs and wider space for the bicycles.
- Freight trucks always cause traffic because they are drive slow due to the weight carrying.
- Freight trucks are dangerous and all the participants make sure to be really aware and paying attention while driving.

Takes too much time

- There is a bad timing on the train schedule especially during traffic hours because it causes even more delays.
- The train schedule also influences the traffic at both the morning traffic hours (7-9 am) and the afternoon traffic hours (3 – 5 pm). Many lanes get backed up when the train crosses, which causes many people to be late for work.
- Driving from Sonoma to Santa Rosa, trucks will cause a lot of traffic because there is only one road.

2 — ROSELAND COMMUNITY BUILDING INITIATIVE (CBI) RESIDENT LEADERS

Date and time: 7/25/2019, 10am–11:30am

Location: Roseland Village Neighborhood Center

Facilitator: Vince Harper, Community Action Partnership

Attendees: 15 participants, 14 Female, 1 Male did not stay for discussion, 1 Female did not sign in, 13 Latino, 1 African American, and 1 White (did not stay)

Description: Resident leadership group meets weekly to improve conditions in the Roseland Neighborhood.

Typical daily trips for attendees:

- Drives daily from Sebastopol to Roseland every day. She drops her daughter to the Adelante Program at SRJC. Drops off son to Summer school, and CAMP. Drives to different places to volunteer.
- Walks everywhere by herself or grandchildren for pleasure/recreation, or to go to appointments. Everything is very close so she likes to walk places.
- Walks 5 blocks to take her daughter to the Adelante Program at the SRJC, then she walks to Andy's park to do volunteer work. She also takes her daughter to a youth group at their church.
- Walks to Moorland or takes the Bus to do volunteer work. She takes her daughter to school either by walking or taking a personal Uber (another participant gives her rides when possible)

- She likes to walk to church or go walk her dogs, she drives to places she needs to go, takes the bus, or rides her bike.
- Drives daughter to school and then drives to the gym.
- Drives her car everywhere. She doesn't like to walk because she doesn't feel safe (Too many homeless people in the streets).
- Takes her son walking to soccer. (It's a 30 minute walk)
- Drives everywhere, if her kids need rides, she will take them.
- Drives mostly everywhere, unless if she needs something from the store (it's nearby her house) she will walk there.
- Drives everywhere but when she lived in Windsor she used to take the bus and that would always be an hour wait, just for the bus to get there.

Transportation System Issues:

Takes too much time (13)

- Buses at Moorland only go by like 3 times a day (wait between times is long and inconvenient).
- It takes all day to get around on the bus, instead of just a couple of hours if you drive your own car.
- Need more buses during the weekend (Same times during the weekend like weekdays)
- Bus schedules are a big issue because they pass by every hour.

Cost too much (8)

- For big families it cost too much money. A solution for that would be if they gave discounts for multiple family members, or reduced prices.

It's not too safe (6)

- Buses are always running behind of schedule so they are always rushing. Sometimes they don't allow you to get on with strollers, or they start going before you even sit down. It doesn't feel like it's suitable for adults with kids.
- Need more Bicycle paths in Roseland.

It harms the environment (3)

- Need newer buses. Eco-Friendly.

Need to improve Maintenance (11)

- Cleanness of the buses or loitering at the bus stops are problems.
- Smart Train — Need to allow enough time for cars to stop because train passes by.
- More safety measures for smart train stops or where the bus passes by. (Especially in Rohnert Park) Example: Rails like in Santa Rosa
- Buses need more cushion for comfort.
- Some buses smell bad.
- Potholes on the street are damaging to the vehicles. Drivers pay maintenance cost.
- Street/road lines need to be more visible, especially when it rains.
- Seats on buses are worn out.
- Buses need a new paint job
- Be more clean
- Some buses are infested with bugs.

3 — YOUTH CIVIC ENGAGEMENT PROJECT (YCEP)

Date and time: 7/25/2019, 5:15pm

Location: Community Action Partnership of Sonoma County Office

Facilitator: Vince Harper, Community Action Partnership

Attendees: 7 participants (CAP sign-sheet), 6 Female, 1 Male, 100% Latino, 2–18 year olds, 2–17 year olds, 3–15 year olds

Description: Youth leadership group focused voter registration and civic education in Sonoma County. Youth are high school students between the ages of 15 and 18.

Typical daily trips for attendees:

- Person 1: Takes bus almost everywhere, to school, clinic etc.
- Person 2: Drives everywhere. Misses people driving her
- Driving is expensive
- Person 3: Walks
- Person 4: tries to take the bus even though she has a car.
- Likes the bus but there are sketchy people and they do sketchy things, walking to the bus stop is hard on the Santa Rosa Ave because it doesn't feel safe due to cat calling.
- Person 5: Mom drives her and she likes that because she gets to observe her surroundings.
- Person 6 Drive herself, hates the responsibility filling up car, has to focus on the road and can't look at her surroundings as much
- Person 7: Doesn't drive yet, parents drive him. Takes the bus to school. Three different buses that pass
- Bus 12 drives through Roseland and the roads are too narrow.
  - » Friendly bus driver

Transportation System Issues:

Cost too much (3)

- Gas is too expensive.
  - » Prices are going up.
- Cheaper to go walking.
- Insurance rates are expensive for teens.

Not Safe (6)

- Going to the mall on the bus in on safe.
- Transit mall downtown is a dangerous place.
- Too creepy on the bus.
- Mentally ill or drugged people on the bus.
- Some people are crazy driving "how did they get a license?"
- Bike lanes too narrow on non-existent.

Too much time (7)

- The Bus doesn't drop you off at exact place- have to go walk blocks to get to your destination.
- The bus can't go as fast as car because they are big and because they make stops.
  - » Traffic congestion adds to the wait.
- Waiting for the bus, sometimes it can be a long wait.
  - » The bus might be on time, it might early or late, there's no way to know.

- Time constraints- you can't really plan because bus routes are unreliable.

Harm environment (6)

- Exhaust/pollution put out by cars and buses.
- Asthma problems due to car exhaust.
- Buses release more gas emission affecting climate change.
- Eco friendly buses are expensive.

Better maintenance (2)

- Trash on the side of the freeway/streets is a problem.
- Upkeep on the buses- its dirty, the windows are scratched.
- Roads are narrow/potholes.
- Paint in the roads is faded.

Solutions

- Promote carpooling.
  - » Cost-efficient
  - » Lower the cost of driving.
- Promote more people biking/ walking
- Make it harder for people to get their driver's license — *in terms of reducing risky drivers.*
- Cross guards not only for school.
- Fix sidewalks so people will walk more.
- Rent a scooter/bike to encourage not using a car.
- "Walk and roll to school" campaign to encourage students to walk, ride to school. Students would get a ticket to enter a raffle for a bike, you get a ticket by having walked to school.

4 — SOUTHWEST SANTA ROSA HEALTH ACTION CHAPTER

Date and time: 8/7/2019, 10am–11am

Location: Community Action Partnership of Sonoma County

Facilitator: Vince Harper, Community Action Partnership

Attendees: 4 participants, 3 Female, 1 Male

Description: Chapter members include government, nonprofit, residents focused on improving health indicators for all Southwest area residents.

Typical daily trips for attendees:

- Car trip to work.
- Car trip to work and company vehicle to meetings
- Biking for most destinations. Carpooling is an option in case of rain or greater distances.

Transportation System Issues:

Takes too much time (6)

- Traffic has increased since the fires
- There are some bus routes that are located on Coddingtown and do not go to down-town. Thus, it takes longer to get to a destination

Needs better maintenance (3)

- There is a significant amount of road debris
- Some roads in Roseland have never been swept. Recology holds the contract.

- There are a lot of potholes throughout the county

Is not safe enough

- There are bike lanes that are not safe due to potholes or how they are designed
- There are distracted drivers that make the road unsafe (i.e. using their phone)
- The transition for bicycles are not safe. There are drivers that just go through the bike lane

Harms the environment (1)

- Cars cause a lot of emissions
- Sebastopol Road is currently in the plans to be widened. The purpose of widening Sebastopol Road is for traffic to move quickly.
- Roseland and Sebastopol road have the highest asthma rates due to the pollution created by diesel.
- There are several cars parked on Sebastopol Road that are in an unsafe location near the Roseland Village Shopping Center. The no parking sign on the edge of the Roseland Village Neighborhood Center has been removed.
- There is a lot of traffic, which creates greater emission and pollution.

Costs too much

- Attendees mentioned that there are certain modes of transportation that are more expensive
- Golden Gate Transit tends to be cheaper than Smart Train
- Smart train stops are not convenient for people
- Smart trains needs more stops
- Sonoma County monthly pass for an adult is $62.50

Unsure about other options to get around (2)

- Figuring out the bus routes can be complicated and confusing

Potential Solutions

- Digital display of bus routes with accurate timing.
- Signing of next route displayed on each stop.
- Have garbage truck and cleaning car pass after people go to work.
- The mapping of bicycle lanes needs to be planned better.
- The bike and pedestrian plan was rushed.
- Implement more walking trails to school (safe routes).
- More safe routes for biking and walking.
- Look closely at the congestion on Sebastopol Road.
- Have an app that has the closest bus stop and estimated arrival time.
- Google maps show map routes
- Carpooling

5 — CHATINO INDIGENOUS COMMUNITY

Date and time: 7/25/2019, 10am–11:30am

Location: Petaluma home

Facilitator: Xulio Soriano, North Bay Organizing Project

Attendees: 9 adults (7 women, 3 males) 4 children.

Description: Primary language: Chatino Secondary language: Spanish

Typical daily trips for attendees:

- Community does not walk or feel safe walking given some of their neighborhoods don't have sidewalks, or the roads near their homed are highways.
- Cars generally drive too fast in Petaluma, and traffic speed limits in the US are generally higher than in Oaxaca, Mexico.
- Hosting family of this listening circle lives off Highway 116 and visitors can only get there relatively safe via car.
- For recently arrived immigrants, it can be confusing to figure out how to request for the bus to stop if signage and instructions aren't big, bold, and clear

Transportation System Issues:

Takes too much time

- More route options (service area) and more bus commutes per day (higher frequency)

Needs better maintenance

- Improving road safety and maintenance for highways and streets was a high priority.

Is not safe enough

- Bus drivers should not be on their phones while driving
- Bus stops could have more lighting especially when daylight savings time ends
- Highway 116 in Petaluma does not have a merge lane to turn left into the host's home, or all other homes in this area
- Lack of sidewalks to walk to Kaiser Permanente via Lakeville Hwy-Hwy 116, or only some portions have a sidewalk.
- Hwy 116 is dangerous and there are often car accidents there, as well as many speeding cars
- More bus stops should have shelter from the rain. Standing on the rain is uncomfortable but also a health risk.
- While people feel generally safe from crime, some believe there is a potential for a white supremacist terrorist attack or other hate crime against immigrants when they are in public

Costs too much

- Busses should be free, or at least, all elderly people should have free bus access

Unsure about other options to get around

- Signage inside bus could have bigger text and fully bilingual instructions(Spanish-English)

Potential Solutions

- Significant need for Spanish-speaking bus drivers, all bus drivers should be bilingual
- Receptionist at bus station terminal should be bilingual at all times
- More information in Spanish about trains, carpools, and other public transit options

6 — AFRICAN AMERICAN COMMUNITY LEADERS

Date and time: 8/15/2019, 5pm–6pm

Location: Community Action Partnership of Sonoma County

Facilitator: Vince Harper, Community Action Partnership

Attendees: 9 participants (one did not sign in), 3 Female, 6 Male, 1 Male did not sign in, 9 African American

Description: African American Community Leaders (NAACP President & Vice President, Chair Juneteenth Festival Committee, Co-Chair Juneteenth Festival Committee, Former SR Council Member, etc.)

Concerns mentioned:

- African-Americans are always left out of job opportunities.
  - » (When the smart train was being built, no black person got a job/work)
- Petaluma – 101 Highway is always backed up. It seems like they have been working on the Highway forever.
- There are no black people helping to build the Highways.
- Rohnert Park – Back in the day you were able to ride your bike with no worries. Now with so much being built, there is not enough space to be out (bike/ walk).
- Rohnert Park – It's not safe because of the bike lanes and crosswalks.
- Everything seems going electric. And the main concern around that are the affordability, jobs, and economic issues. Yes, it helps the environment but how does it help the people.
- Santa Rosa – I drive around most of the day doing drop offs and pickups. I do ride my bike to downtown since I live close. When the train was being built, I planned to get use it once it was done but the train is too expensive.
- College students should be able to use the bus for free. Most college students will use Uber or Lyft to get around, this would help them save money and encourage them to use public transportation more often.
- Bus only goes by every hour; it takes too long to get around.
- Train takes too long to get around.
- A lot of people of color don't know much about the train "Where does it go?"; "The train was not built for us."

Transportation System Issues:

Takes too much time (9)

- Bus takes too much time.
- Solution: Bus routes should be 15 minutes apart. 45 minutes to 1 hour doesn't work.

Needs better maintenance (4)

- App to report street maintenance was useful and easy to use. It's now gone. Reporting things is more time consuming now.
  - » Solution: Bring back the application "My Santa Rosa"
- More seating are needed while waiting for bus. (People are tired and want to sit)

- Where is the money coming from?
- Thinking about long-term maintenance; if money doesn't continue to come in, these plans will fail on the long run.
- Better Material to fill in the potholes.
- More Bike racks are needed. More businesses should have them.
- Buses need bike racks, not all buses have them.
- Bicyclist should have own parking area different parking away from the cars. *Will be safer.
- Some streetlights take too long.

Is not safe enough (5)

- Not safe to ride bikes.
  - » Solution: Bike paths are needed on more roads and bike paths need to be closer to the sidewalks.
- Homeless loitering around bus stops
  - » Solution: More monitoring (Police presence)
- Train has its own security, buses should have some too. That would give more jobs.
  - » Solution: Subcontracts. Patrolling solves moat issues there is.

Harms the environment (1)

Costs too much (1)

- Lives in Petaluma and uses a lot of bus transfers (County and City), navigating times, and cost.
  - » Solution: Should have some kind of discount for city and county bus transfers.
- Train not affordable for people.
  - » Solution: Employers should pay or help their employees. Have some of discounts. If employer doesn't want to help the employee then maybe people who use multiple transportations can get a tax reduction to use towards their taxes. *rewarded for going green.
- For people who commute, it adds up when you use the Bart and have to pay the golden gate bridge fee.
- Potholes are big issues that add cost for personal vehicle repair and maintenance.
- Traveling to the City and to the Airport are costly and inconvenient to use different modes of transportation.
  - » Solution: There should be something in place like a fast track, maybe a clipper card for people who use multiple transportations. This would help with using less paper and hopefully a discounted cost.
- Higher healthcare costs.
  - » Solution: Health benefits if people could walk or bike ride more (lower the health cost).
- Students need affordable options.
  - » Solution: There should be a shuttle between SSU and train station.
- Parking lot to get the train; Tickets are required to be bought online. For many seniors or people who are not tech savvy can see it as a difficult task.

  - » Solutions: Ticket Kiosk or a person assisting at train stops.

Unsure about other options to get around (4)

- Don't know how to use the bus system.
  - » Solution: Should have a number where people can call to get help to get around on the buses or train.

Potential Solutions

- See throughout issues.

7 — COUNCIL ON AGING

Date and time: 8/15/2019, 10am–11:30am

Location: 30 Kawana Springs Road, Santa Rosa

Facilitator: Renee Tolliver, Council on Aging

Attendees: 9 participants (6 women, 3 men)

Description: Stakeholders including service delivery staff and aging adult advocates.

Typical daily trips for attendees:

- Doctor visits
- Community centers
- Drive my car, bike sometimes
- Get a ride with my husband because I no longer drive, am concerned about what happens when he stops driving
- Just launched a volunteer driver program in Healdsburg for people who have said they could finally stop driving.
- With older adults, lots of paratransit, lots of volunteer organizations, Uber or Lyft (don't know anyone who uses SMART as it's expensive and inconvenient).
- Mostly transit and paratransit, which is good if you're in town. Paratransit must be in Ð mile of a route.
- We are lacking in terms of other communities where people don't even own a car.
- Rural aspects of different parts of the county are underserved and people are isolated for getting to community groups or appointments.
- In the 70s did not have bus service, progress was made through connections in

Sacramento, was commuting from East bay then. Have lived up here since 98, but have been prisoners in our own vehicles and still don't know that much. Have been in the train and have some comments about that.

Transportation System Issues:

Takes too much time (10)

- Senior citizen will get fatigued by transit, wait, get to destination, wait again, get back home. Can't be out for 6-7 hours and will get fatigued.
- Hard to get to appointments on time with transit, would have to arrange for a much earlier ride. Get places early.
- Takes tremendous amount of time and labor to do a volunteer driver program.
- Live 20 minutes from a bus stop, thank god for my friends who drive me. Used to be I had to plan 6-7 hours for a Kaiser appointment. People who drive vs. take bus live miles apart.
- Just to fold out and read the schedule in fine print is beyond their capabilities. In home support help (for those who qualify IHHS). Ambulances have to come pick up seniors who fall from walkers on the way home.
- If you live in Cloverdale and you have to get to Kaiser, you're talking about multiple transfers, leaving in the morning and getting back in the evening. A taxi ride is astronomical ($50 each way min).
- Need to run buses more frequently to accommodate this. Increase schedule to accommodate for seniors.

Is not safe enough (4)

- Taking transit far away, need to get up early (dark) and come back late (dark)
- Ride service is with strangers
- Lift on the bus is good, but otherwise difficult to get on and find a seat, or get up from the seat in time.
- Always ask Lyft driver what his name is for safety.
- There is also Go Go Grandparent.
- Lyft and Uber now also sharing driver name with relatives.
- There is a program in place to teach older adults about buses. Have tried this with older adults before and they don't want to do it (spend their time). Transit rep will go with them on the regular route. In 11 years have not had anyone take her up. Talk to Jody Ten at Sonoma County Transit.
- Medication is also an issue if they are travelling all day.

Harms the environment (2)

- If I had another dot I would have put it there.
- Need to expand routes for this as well.
- Have used the SMART train to San Rafael, would like to use it for Kaiser in San Rafael and to the airport. I called the bus service to airport and they don't stop at Rohnert Park. Have to walk from station and it's too far.
- If people could live in Sonoma County without a car, or only one car, we might not choke to death on the smog.
  - » Why not have smaller vehicles and smaller buses?

Costs too much (8)

- Paratransit is too expensive, $3 one way, but if you go between zones it's $6. If you have to go every week, or three times a week on dialysis.
- Don't know any older adults who can use the train at all. For myself, never could afford $200/month with a pass.
- It's the cost of getting to/from train station, and they don't run often enough. Set up for tourist industry and for upper income jobs in Marin.
- Tried paratransit and swore would never ride it again. If we had the money to use that money and plan our own ride service, it would be quite different.

Unsure about other options to get around (6)

- People don't know there is a shuttle bus in Healdsburg. Would take people on ride-alongs. There is a map, but doesn't list all the stops available (only major stops). Would have the driver point out every single stop.
- When I figure out all that's involved with owning a car, I use Lyft and it's not that cheap, but I think of all that it would have cost to drive there. Paratransit would cost about as much, but far more in time.
- Know that a lot of older adults share rides. Neighbors spread the word. It's pretty rare – a few very fortunate people.
- Think about seniors who need a little extra hand holding, don't know where to send people for that personalized service. Navigate walker, and make sure they actually get to the office (not just dropped off at the curb). Paratransit is curb to curb and not door to door.
- For some, got scared after paratransit forgot to pick them up.
- Women driving women, catholic charities is an option.
- Look at non task-oriented during the week, not a lot available on the weekend (people going to church or temple, people are not comfortable using Lyft or Uber because it is never the same driver and so they rely on others in the congregation).
- Made flyers for a woman who couldn't get a ride to church, these networks are important.
- Was looking at list of other types of transportation and it included Sonoma County Paratransit. Getting information out there is important. Had a recent knee injury and couldn't drive.

Potential Solutions

- Smaller vehicles.
- Incentives for using transit (like other things in your home).
- The HOV lane is way underused.
- Get Kaiser to understand that if they provide a shuttle from transit that their costs will go down (people won't fall, get sick, etc.)
- Both Kaiser and casino would get benefits from a shuttle.
- Kaiser has partnered with Uber and Lyft for those reasons in other cities. Book the driver when you book your appointment because it saves them money when you make your appointment.
- Shuttle buses can be better resourced.
- Under AAA transportation, Kaiser needs to be more involved with transportation of clients. Get people to appointments and share what it costs. If Kaiser does it, other hospitals will follow suit.
- For people who have medical issues. provide transportation reimbursement.

8 — BAYER FARM POTLUCK

Date and time: 8/16/2019, 5pm–6pm

Location: Bayer Farm, 1550 West Ave. Santa Rosa, CA 95407

Facilitator: Susan Garcia, Center for Wellbeing

Attendees: 6 women, 2 men (Latinos)

Description: Due to the nature of not knowing how many people would attend (coordinator at Bayer Farms stated that it varies from day to day, sometimes 10 or 80 people) used dot method to get participant feedback as well as small group discussions to get more information and assistance with completing the survey. Set up included people coming up to vote using the sticker dots and small group discussions at individual picnic tables. Assistance with completion of surveys was needed for most individuals.

Typical daily trips for attendees:

- Most participants drive their personal car.
- Not many participants use bikes as a mode of transportation or work from home.
- One participant expressed that she uses the bus all the time and is her source of transportation to be able to get to work or to go to other important places, like doctors' appointments.

Transportation System Issues:

Takes too much time (5)

- The train is also causing too much traffic back up during already high traffic times for vehicles. This being in the morning 7:00 am – 9:00 am and in the afternoon around 3:00 pm – 6:00 pm. When people are going and returning to work/school.
- Too many drivers now in Sonoma County. Too much traffic in the morning and evenings when people are trying to get to work or school or are returning home. Drivers are sometimes forced to take alternate routes that in turn take longer and cost more in mileage and gas.

Needs better maintenance (8)

- Many streets do not have finished sidewalks or even sidewalks at all in certain roads. Many participants mentioned the sidewalks and streets in the 95407 neighborhood, including Roseland and Moorland.

Is not safe enough (8)

- With the recent news of some suicides/deaths due to the train, the safety of the train is at question. Belief that the train should run, but should be safe for ongoing traffic and pedestrians.
- Many expressed that the freight trucks are a huge danger and that many of the drivers do not follow the DMV traffic laws.
- They can be dangerous when they are driving on the interstate. They have very big blind spots, so also very hard to know if driver is aware of you when you are driving next to them.
- Belief that the freight trucks should only be allowed to drive on the lane closest to the interstate exits as to be safer for other drivers as the freight trucks carry heavy loads and often cannot drive over a certain speed limit.

- Traffic safety laws should be enforced for drivers of freight trucks
- Streets should be labeled with red no parking lanes as ends of streets. Many cars park at the end of the streets and end up causing blind spots that make it difficult to enter into an intersection.
- Many people expressed fear while walking, due to so much sexual harassment due to catcalling.
- Sidewalks feel too close to oncoming traffic. Hard to walk on some sidewalks with kids. Fear for safety.
- Not enough crosswalks for pedestrians. Many drivers do not respect these laws.
- Many participants felt that it is unsafe for bicyclists as there is not many bike lanes and often bicyclists drive too close to ongoing traffic.
- There have been many accidents with bicyclists that it does not feel safe for either the drivers or the person on the bikes.
- More regulations should be put in place for the bicyclists.

Harms the environment (5)

- One participant shared that they believe that using a bike as a method of transportation is not going to help with any climate changes as it is very unrealistic.

Costs too much (4)

- The train is very expensive and seems to be too dangerous.
- Belief that the train was put in place for working adults and students to commute to work or school, but it is too expensive. Even to use this mode of transportation as a family outing it is not realistic to spend over $20 on a one-way ticket.

Unsure about other options to get around

- Not all participants expressed use of the bus as a mode of transportation. Many participants expressed confusion with the new bus system. People are uncertain of how the bus system works or what bus to take to get to a certain destination. Fear of getting to a destination they did not intend and getting lost.

Potential Solutions

- Working from home is more convenient and better for the working adult, especially those with a family, but unrealistic in meeting work goals.

9 — LATINO SERVICE PROVIDER YOUTH PROMOTORES AND PROGRAM STAFF

Date and time: 8/17/2019, 10am–11am

Location: Center for Well-Being

Facilitator: Susan Garcia, Center for Wellbeing

Attendees: 7 Females and 1 Male / Latino/White

Description: Mainly youth ages 15-18 and program staff that is in their 20's. No translation services were required, and the room was set up as an informal discussion circle around a table. Refreshments were provided to participants for their participation

Typical daily trips for attendees:

- The bus is not really used, but it is needed.
- A lot of students that attend Piner High use the bus for their transportation to get to and from their homes and school.
- Many youth also use the bus not just to get to school, but also to get their jobs.
- One participant is a high school senior at Mario Carrillo High School and she states that from her home it is a 5 to 10 minute drive or bike to school. She believes that her neighborhood feels very safe for her to be able to bike or walk to school, but feels there is a need for more bicycle safety.

Transportation System Issues:

Takes too much time

- There is a belief that traffic has gotten worse after the fires here in Sonoma County.
- Bad transition from HWY 101 and HWY 12 going north around the Santa Rosa downtown exit.

Needs better maintenance

- Unincorporated Sonoma County needs a lot of attention. Many of the residents believe that no County funds are not being spent there to rebuild roads or do any maintenance. One of the roads mentioned was Chico Ave where there have been numerous requests and even asks to Lynda Hopkins to help rebuild the road on that street, but there has been no responses and no work done on that road.
- There was a clear consensus that there are also many streets that have many potholes and need more maintenance. Many of the streets that were mentioned were those surround Piner High School, Todd road and roads surrounding Comstock Middle School.
- There is also a need for many sidewalks to be built in the Rincon Valley area, which in specific near the middle school (Rincon Valley Middle School) and the High School (Mario Carrillo High School).
- One of the program staff mentioned that in the Moorland Neighborhood there also needs to be more sidewalks.
- See more walking bridges over highways to help with getting across neighborhoods.

Is not safe enough

- The remaining students live in the Piner neighborhood and they expressed that they feel there is a need for more traffic safety, like crosswalks surrounding the schools. Many students walk to school and

sometimes use a back entrance but is also unsafe and there needs to be more flashing lights for pedestrians.

- Recommended more traffic checks to make sure drivers are using blinkers and freight trucks not using the middle lane.
- Motorcycles should only drive in the fast lane.
- Bus stops are often not even on sidewalks and are just on the side of a road, which is very dangerous. Mentioned the one on Hwy 12 heading to Sebastopol.
- Not safe to ride bike in the evenings.
- The train is unsafe when it comes to pedestrians and traffic.

Costs too much

- Belief that there is a really need for more cost saving options for all students to be able to afford the bus, programs like the one for the students that attend the JC and have free bus rides.
- The train is too expensive, not a real reliable source of transportation.
- Because the train is so expensive it is only for the people that have the financial resources.

Unsure about other options to get around

- Bus maps are so confusing, there are now many numbers and letter for each of the stops, which are not easy to follow. Recommended that they keep it simple, like buses 1-14 (example) or look at other really good transportation systems, like the one in Washington or Chicago.

Accessibility

- Clipper card system shuts off on the bus, so it is not really reliable.
- Fear of riding the bus and getting lost due to confusing maps system.

Potential Solutions

- Like the traffic lights at the Hwy. entrances. Helps with traffic flow.
- Concrete paving has been really good to help stop flooding in many areas in the County.
- More bus stops need to be placed in more locations.
- Recommended concrete dividers for bike lanes.
- Many students also ride their bike to school, so more bike lanes are needed, especially near the schools.
- Bike lanes should be on every street.
- Recommended colored bike lanes.
- Need more light posts on Petaluma Hill Road.
- There needs to be places for people to sit at each of the bus stops with some sort of shade being provided.
- There also needs to be a separation from bus stops and ongoing traffic.
- Would be great if the train went all the way to San Francisco or Larkspur.

10 — GRATON DAY LABOR CENTER

Date and time: 8/20/2019, 8:30am

Location: Graton Day Labor Center

Facilitator: Xulio Soriano, North Bay Organizing Project

Attendees: 16 signed sheet, 18 total (two did not sign attendance sheet). 4 females, 14 males.

Description: Majority Oaxacan Immigrants. Primary language: Spanish. Surveys filled out: 1 survey completed out of need because of the $10 card incentive

Typical daily trips for attendees:

- Most people commute from Santa Rosa to Graton Day Labor Center without using public transit.
- They have used public transit in the past but generally stop using it after their economic conditions improve.
- Recently arrived immigrants tend to move first before saving up to buy a car.
- Additionally, community organizing for immigrant rights has resulted in less cars being confiscated and sold by local police/car impound businesses now that drivers can have a licensed driver pick up their car if they commit a minor traffic violation. CA AB 60 has also allowed certain qualifying immigrants to have a special driver's license.
- Majority of participants did not know enough about public transit and requested better outreach in their language and though multiple channels of information dissemination.

Transportation System Issues:

Is not safe enough

- There is a general feeling of adequate safety while using bus, but there is a feeling of concern for hate crimes or terrorist attacks.
- Parents do not feel safe sending children to school by themselves due to stories of sexual predators or kidnappings
- School zones are dangerous for pedestrians and cyclists during rush hour. More crossing guards are needed
- Crossing guards could be paid or additional guards provided by Transportation Agency in collaboration with school districts

Costs too much

- Public transit should be entirely free

Unsure about other options to get around

- Even if some things are translated, people assume there is still little to no information in Spanish.
- Information in Spanish should be mailed to people's homes
- Information should be shared in Spanish-speaking TV channels, such as Univision
- In addition to translating information, outreach and campaigning in Spanish is needed so people can trust to expect information in Spanish.

Potential Solutions

- More frequent buses from Santa Rosa to Graton Day Labor center could entice people to use them.

11 — TRIQUI INDIGENOUS COMMUNITY

Date and time: 8/25/2019, 4pm

Location: KBBF Bilingual Radio Station Headquarters

Facilitator: Xulio Soriano, North Bay Organizing Project

Attendees: 8 (5 females, 3 males)

Description: 2 children and 1 childcare provided were present in an adjacent room. Primary language was "Triqui" language and the secondary language was Spanish. This circle had two translators making sure all information was translated from Spanish into "Triqui" language. All attendees were from Santa Rosa, with the exception of a participant from Healdsburg.

Participants spent the majority of time expressing concerns and sense of mistreatment. While other listening circles constituted a back fourth dialogue with transportation guiding questions, the majority of people present in this circle needed a way to report grievances, fears, and injustices. They also offered some solutions.

Concerns mentioned:

- The group was not sure how to file complaints, did not know what number to call, or did not feel comfortable calling an institution to make a complaint given they feel more comfortable speaking their indigenous language, and those who are fluent in Spanish are younger students who don't feel comfortable making a complaint.
- There is often a lot of dust on the bus seats
- A participant worked cleaning the buses, but stated that the payment was low and the number of buses to clean was high, so cleaning was not done very thoroughly by him and his bus cleaning colleagues.
- Some people leave trash and food in the business
- Another mother participant and her children once had a bus driver tell them that he was tired of having to stop at bus stops on standby when nobody was there. They felt a sense of disrespect and rudeness directed at them on behalf of the bus driver. The mother's small children translated the bus driver's words to her.
- The same mother as above has had to seek shade next to a tree near the bus stop on hot days, and has had to run and wave at the bus and sometimes the bus doesn't stop. She feels this could be intentional, or that the bus drivers lack compassion given past experiences.
- An elderly indigenous participant has mentioned a sense of dehumanization when he has seen other elderly folk or bus users of any age being told they cannot ride the bus because they were short 25 cents or less, so users have had to pay 5 dollars and not receive any change.
- Additionally, above mentioned elderly man has seen another elderly person not allowed to take the bus because he was "short a few cents"
- All participants raised hands in agreement that they have at some point felt a level of disrespect and dehumanization from bus drivers

Transportation System Issues:

Takes too much time

- More than once a participant has ridden on a bus that broke down and took a significant

amount of time for the issue to be resolved, making her late to work or to doctor's appointments

- A significantly late bus leaves a deep feeling of distrust for a bus user and an unwillingness to rely on public transit

Needs better maintenance

- More sidewalks needed in some neighborhoods.
- Potholes need to be fixed in low-income neighborhoods.

Is not safe enough

- Some bus users ingest different types of drugs while on the bus, or before they get on bus and begin to yell or scare other bus riders
- Some bus drivers use their phone while driving
- Sometimes there is a feces or urine smell on the bus
- A bus driver once stopped for a cigarette break for about 10 minutes, or stopped to be on standby and smoked outside the bus off the road while on standby. This scared and confused a student participant.
- During severe heat waves, lack of shading is a health risk and a concern to participants health and well-being, especially for elderly and moms with small children.
- Second hand smoke from bus driver or bus riders is a concern.

Costs too much

- One participant witnessed a non-English speaking elderly person pay full price instead of senior price because they did not speak English. The bus driver did not offer the discounted price and the user did not know how to ask about the discounted price

Accessibility

- Only a few bus drivers speak Spanish, or it is not clear if they speak Spanish.
  - » A bus driver once grabbed an apple from a participant's hand, yelled at her in English, threw it in the trash, and embarrassed her. She could not understand him and it scared her.
  - » A participant mother believes a cultural change is needed within the public transit institutions, and receptionists, should be multilingual. Bus drivers should not be majority white monolingual English speakers.

Potential Solutions

- All buses should give change automatically. Every dollar counts for them. It feels unjust when users cannot get change back.
- The County and Transportation Agency should identify other significant languages by immigrant communities spoken other than Spanish.
- All bus drivers should speak Spanish
- Additional options for indigenous language translations could be institutionalized with a hotline phone number for translators
- A Spanish speaker who is familiar with the bus and other public transit systems could be a translator in person as accompaniment, or over phone as a temporary solution until there are bilingual bus drivers.
- Not everyone can read text, so video or audio information is also needed.

12 — PETALUMA SENIOR CAFÉ

Date and time: 8/28/2019, 12:20pm– 1:30pm

Location: Petaluma People Services — Senior Café

Facilitator: Susan Garcia, Center for Wellbeing

Attendees: 17 participants (Seniors 65 and up, White/Latinos)

Description: Room was set up as a cafeteria with about 7 tables and 4 or 6 people per table. People were in in groups, but a microphone was used so that all participants could hear. Not all seniors wanted to participate in the discussion, dot voting or to take the survey. About 20-25 people present, although not all participated.

Typical daily trips for attendees:

- It takes me about 2 hours for one participant to get to the Senior Meals Café

Transportation System Issues:

Takes too much time

- Too much traffic congestion.

Needs better maintenance

- Belief that the county had the worst transportation system.
- The roads are really bad.

Is not safe enough

- Some seniors walk to get to places, like the grocery store and are walking in the heat and close to traffic.
- Seniors do not want to use the public transportation system because they are confused on how to access/use it and also feel alone. Riding the bus by themselves can be dangerous.
- Train is too noisy.
- Belief that Petaluma Blvd. is dangerous for many drivers.

Harms the environment

- Worried about gas emissions.
- Too many cars on the road.
- Some pros/cons to gas engines.
- There should be more Teslas.
- More incentives for electric vehicles.
- Not enough power/electrical sources for all electric vehicles.
- The train is not practical because it depends on electricity in case of a power shut off.
- Unfair that the whole state has to pay for the charging stations for electric vehicles.

Costs too much

- Paratransit is $3.50 door to door and pay every time for ride.
- Public Transportation modes should be free to seniors.
- SMART Train is too expensive.
- County transportation money is not spent appropriately.
- Good on Price!
- Reduction for seniors and no cost for Vets.
- Gas in Petaluma is very expensive.

- If you don't use the SMART train, why do all of us have to pay.

Unsure about other options to get around

- Not all seniors have access to the internet, which seems like the only way to get information.
- Unsure of transportation options for seniors.
- The bus system seems to run, but with not a lot of people on board.
- Are volunteers able to drive the county buses?

Potential Solutions

- How about a small bus from Guerneville to Armstrong Wood (Every Hour)?
- 1 Ride by Petaluma People Services offers 3 rides 3 x a week for seniors.
- Utilize new resources, like Uber/Lyft for more individualized rides for seniors.
- Have more volunteer drivers to help seniors get around.
- Have a bus provide rides to get to the coast at least during the summer.
- A coastal bus from Petaluma, Cotati and Rohnert Park.

A-1.3 CBTP Projects Inventory Sonoma

STATUS OF PROJECTS IDENTIFIED IN COMMUNITY-BASED TRANSPORTATION PLANS ADOPTED FROM 2007–2010

Community-Based Transportation Plans Project Inventory

Between 2006 and 2009, SCTA studied four Equity Priority Communities (formerly called Communities of Concern) identified by MTC. The four communities include Roseland in southwest Santa Rosa, the Springs area in Sonoma Valley near Sonoma, the Lower Russian River area including Guerneville and Monte Rio, and in Healdsburg along Highway 101. Each of these areas is unique, with differing characteristics and challenges. The resulting documents are the following SCTA Community Based Transportation Plans (CBTP):

- Roseland Community-Based Transportation Plan, 2007[1]
- Lower Russian River Community-Based Transportation Plan, 2009[2]
- Healdsburg Community-Based Transportation Plan, 2009[3]
- The Springs Community-Based Transportation Plan, 2010[4]

Each recommended project or solution identified in these four CBTPs is inventoried in the matrix below with the status as of June 2021. While many of these projects have been implemented, many others have not begun or have only been partially implemented. Lack of funding is the most common reason that projects have not been implemented; however, some projects are complex due to right-of-way constraints or competing needs.

1 https://scta.ca.gov/wp-content/uploads/2018/01/Roseland_Community_Based_Trasnportation_Plan_-_Final_Roseland_Report.pdf
2 https://scta.ca.gov/reports/Lower_Russian_River_Community_Based_Transportation_Plan.pdf
3 https://scta.ca.gov/reports/Healdsburg_Community_Based_Transportation_Plan.pdf
4 https://scta.ca.gov/reports/The_Springs_Community_Based_Transportation_Plan_06-03-2010.pdf

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
1	Expand Healdsburg Transit's fixed route weekend service	Healdsburg Community Based Transportation Plan	No project initiation	
2	Marketing/Education program to increase bus ridership	Healdsburg Community Based Transportation Plan	Fare free shuttle marketing	
3	Taxi Voucher Program with the local taxi company	Healdsburg Community Based Transportation Plan	DASH Volunteer Driver Program provides free rides for seniors who cannot drive within City limits. DASH does not have wheelchair accessible vehicles.	
4	Safe Routes to School	Healdsburg Community Based Transportation Plan	Healdsburg Elementary School campuses, Healdsburg Junior High School, and St. John's elementary school, have all participated in Safe Routes to School.	
5	Expand Healdsburg Transit's fixed route service into evening hours	Healdsburg Community Based Transportation Plan	No project initiation	
6	Add Sonoma County Transit route 60 express service between Healdsburg and Santa Rosa.	Healdsburg Community Based Transportation Plan	Express trips suspended and service temporarily reduced. Additional non-express peak service on Route 60 expected to return.	Express trips suspended and service temporarily reduced due to COVID-19 impacts.
7	Community Transportation Manager/Volunteer Driver Program.	Healdsburg Community Based Transportation Plan	DASH Volunteer Driver Program provides free rides for seniors	
8	Maintain Healdsburg Transit's existing fixed route service.	Healdsburg Community Based Transportation Plan	Local transit service that was in place during the development of the CBTP has been maintained.	
9	Bicycle Education Campaign and Street Skills Classes.	Healdsburg Community Based Transportation Plan	No project initiation	
10	Add sidewalks along the southern end of Healdsburg Avenue	Healdsburg Community Based Transportation Plan	No project initiation	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
11	Increase Sonoma County Transit route 60 frequency between Healdsburg and Santa Rosa.	Healdsburg Community Based Transportation Plan	Express trips suspended and service temporarily reduced. Additional non-express peak service on Route 60 expected to return.	Express trips suspended and service temporarily reduced due to COVID-19 impacts.
12	Bus Voucher Program	Healdsburg Community Based Transportation Plan	Bus trips on the local circulator are now free	
13	Class II bicycle lanes along March Avenue	Healdsburg Community Based Transportation Plan	Complete	
14	Class II bicycle lanes on Westside Road	Healdsburg Community Based Transportation Plan	No project initiation	
15	Install more shelters and benches at bus stops	Healdsburg Community Based Transportation Plan	A replacement of the shelter at Healdsburg Plaza is in progress, which will include a new real-time arrival information sign.	
16	Extend Healdsburg Transit's fixed route service on Fitch Mountain Road	Healdsburg Community Based Transportation Plan	Rt. 67 service is provided as far east as Orangewood Dr. on Fitch Mtn. Rd. Healdsburg DASH offers scheduled rides within Healdsburg for seniors who are not able to drive.	
17	Improve roadway crossings in area of Safeway	Healdsburg Community Based Transportation Plan	No project initiation, would be condition for redevelopment	
18	Extend Healdsburg Transit's fixed route to end of Parkland Farms Blvd.	Healdsburg Community Based Transportation Plan		
19	Relocation of downtown Healdsburg Sonoma County Transit route 60 southbound bus stop	Healdsburg Community Based Transportation Plan	Bus shelter installed at 227 Healdsburg Ave.	
20	Add benches and shade structures along Foss Creek Pathway	Healdsburg Community Based Transportation Plan	Added benches and rest area under construction. Shade structures not needed because there is natural shading on much of the path.	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
21	Class II Bicycle Lanes on Highway 116: Foothill Dr. to Duncan Rd.	Lower Russian River Community Based Transportation Plan	No project initiation	
22	Class II Bicycle Lanes on River Road: Westside Road to Highway 116	Lower Russian River Community Based Transportation Plan	No project initiation	
23	Class I Multi-Use Trails (Off-Road) Trails Feasibility Study	Lower Russian River Community Based Transportation Plan	Lower Russian River Trail Feasibility Study approved February 11, 2020	
24	Add Express Bus Service to Santa Rosa	Lower Russian River Community Based Transportation Plan	Express trips suspended and service temporarily reduced. Additional non-express peak service on Route 20 expected to return.	Express trips suspended and service temporarily reduced due to COVID-19 impacts.
25	Transportation Manager Coordination	Lower Russian River Community Based Transportation Plan	Sonoma County Human Services, Area Agency on Aging provides funding and coordination with the Sebastopol Senior Center for their volunteer driver program. Local bus route 28 is free with subsidies from the County.	
26	Add Evening Bus service	Lower Russian River Community Based Transportation Plan	Route 28 runs from 7:45 to 5:08 week-days and Saturdays, which is expanded from the 9:15 to 3:45 schedule at the time of the plan. Route 20 hours have been reduced to 7:35 to 8:15 from 5:45 to 10:15 at the time of the plan.	Service temporarily reduced due to COVID-19 impacts. Additional peak service on Route 20 expected to return.
27	Safe Routes to School (non-Infrastructure)	Lower Russian River Community Based Transportation Plan	Guerneville school has participated in all SRTS elements. Monte Rio and Forestville have held walk and ride to school events.	
28	Install More Shelters and Benches	Lower Russian River Community Based Transportation Plan	A shelter in disrepair was replaced and a new shelter was added since 2016, as well as a new bench by the Russian River Senior Center.	
29	Expand Local Bus Service	Lower Russian River Community Based Transportation Plan	Route 28 now serves Russian River Senior Center, Guerneville School, and Guerneville Library on Armstrong Woods Road	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
30	Bicycle Education in English and Spanish	Lower Russian River Community Based Transportation Plan		
31	Repair Guerneville Sidewalks	Lower Russian River Community Based Transportation Plan	Caltrans Hwy 116 ADA sidewalk project between River Road and Fife Creek on schedule for 2022-23	
32	Decrease Bus Headways	Lower Russian River Community Based Transportation Plan	Frequency increases on Route 28 are not currently planned. Saturday service added in 2020.	Current service frequency is sufficient for demand.
33	Signalization of Intersection of Highway 116/Drake & Neeley Roads	Lower Russian River Community Based Transportation Plan	No project initiation	
34	Permit Larger Items on Buses	Lower Russian River Community Based Transportation Plan	No project initiation	Limited space for large items on-board buses
35	Signalization of Intersection Highway 116/Mill Street	Lower Russian River Community Based Transportation Plan		
36	Class II Bicycle Lanes on Armstrong Woods Road; Highway 116 to State Park	Lower Russian River Community Based Transportation Plan	Complete - Class II lanes along majority of Armstrong Woods Rd. - road is too narrow approaching park entrance	
37	Build Sidewalks in Monte Rio	Lower Russian River Community Based Transportation Plan	repaired & extended along w/ADA ramps on Main St. & Bohemian Hwy (Hwy 116 to the bridge)	The road is too narrow in other areas
38	Build Sidewalks in Guerneville	Lower Russian River Community Based Transportation Plan	No project initiation	
39	Class II Bicycle Lanes on Highway 116: Armstrong Woods Rd. to Foothill Drive	Lower Russian River Community Based Transportation Plan	No project initiation	limited right-of-way
40	Permit More Bicycles on Bus	Lower Russian River Community Based Transportation Plan	All intercity buses can currently accommodate up to 3 bicycles on front-loading racks.	Further expansion of racks is not feasible due to vehicle length limitations.

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
41	Casual Car-Pool System	Lower Russian River Community Based Transportation Plan	Dynamic carpool matching through Merge may be used by people wishing to carpool	Further study would be needed to determine whether there is critical mass to warrant dedicated pick up areas for casual carpool
42	Volunteer Driver Program for Seniors' Transportation	Lower Russian River Community Based Transportation Plan	"Sebastopol Senior Center's volunteer driver program serves this area; however, sustainable funding, volunteer recruitment, and lack of wheelchair accessible vehicles are ongoing challenges. West County Community Services operates a West County shuttle with a wheel chair lift through grant funding. Ongiong funding of this program is uncertain."	
43	Reduce Incidences of Speeding and DUIs	Lower Russian River Community Based Transportation Plan	No current specific efforts	County accepts requests for placement of a speed feedback trailer on County Roads
44	Class II Bicycle Lanes on Hwy. 116: Mays Canyon Rd. to Armstrong Woods Rd.	Lower Russian River Community Based Transportation Plan	No project initiation	
45	Class III Bicycle Route on Cazadero Highway/Austin Creek Road	Lower Russian River Community Based Transportation Plan	No project initiation	
46	Auto Loan Program	Lower Russian River Community Based Transportation Plan	No project initiation	
47	Build Sidewalks in Rio Nido	Lower Russian River Community Based Transportation Plan	No project initiation	limited right-of-way
48	Class II Bicycle Lanes on Highway 116: Duncan Road to Moscow Road	Lower Russian River Community Based Transportation Plan	No project initiation	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
49	CityBus Evening Service Extension	Roseland Community-Based Transportation Plan	Schedule modifications were implemented with Reimagining CityBus; however, hours of operation are relatively the same. Sunday service is now provided on all routes	Additional funding needed to expand hours of service
50	CityBus Frequency Improvements	Roseland Community-Based Transportation Plan	Route 2/2B (formerly 9/9W) weekday headways reduced from 30 to 15 minutes from Transit Mall to Stony Point Rd. and weekend headways reduced from 60/75 to 30/45. Hourly Sunday service added on route 15.	Revenue neutral service improvements from Reimagining CityBus
51	Restructured Transit Service (Route 20)	Roseland Community-Based Transportation Plan	Transit service restructured through implementation of Reimagining CityBus after extensive outreach. Trunk portions of routes 2/2B, 12, and 15 are now bi-directional with tail loop ends.	Unfunded Phase II of Reimagining CityBus would increase bi-directional service and extend routes 12 and 15.
52	Bus Stop Improvement	Roseland Community-Based Transportation Plan	Benches have been installed at an additional four bus stops in Roseland.	
53	Roseland Neighborhood Shuttle	Roseland Community-Based Transportation Plan	No project initiation	
54	Pedestrian Improvements	Roseland Community-Based Transportation Plan	Crosswalks installed near Roseland Elementary School and Roseland University Prep, Stony Point Rd, various sections of sidewalk installed on Burbank Ave. and Stony Point Rd.	As part of the Roseland Annexation agreement, the County will provide $6.2M over a 10-year period to the City to make roadway improvements.
55	Bicycle Lanes	Roseland Community-Based Transportation Plan	Class II lanes on Stony Point Rd, Hearn Ave from SMART Pathway to Stony Point, Sebastopol Rd from Dutton to Corporate Center Pkwy. SMART (formerly NWP RR) Class I	Planned Class II on Dutton Ave, Burbank Ave. Planned Class IV on Sebastopol Rd., Class III on Earle St
56	Multi-Use Paths Northwestern Pacific Railroad (Roseland Segment)	Roseland Community-Based Transportation Plan	SMART Pathway complete from W. 3rd St to Bellevue Ave.	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
57	Roseland Creek Multi-Use Path	Roseland Community-Based Transportation Plan	No project initiation. Segment in Bike/ Ped Master Plan	
58	Safe Routes to School	Roseland Community-Based Transportation Plan	Shepphard Accelerated Charter and Roseland Elementary School have participated in Safe Routes to School.	
59	Street Smarts	Roseland Community-Based Transportation Plan	The County of Sonoma conducted a safety campaign around the three-foot rule for passing bicyclists. Updating StreetSmarts campaign messaging is included in the 2018 Bicycle & Pedestrian Master Plan	
60	Transit Orientation and Travel Training	Roseland Community-Based Transportation Plan	CityBus has continued to provide travel training services in Roseland.	Demand for these services paused during the pandemic but is expected to return.
61	Enhanced Transit Information	Roseland Community-Based Transportation Plan	Transit route and scheduling information has significantly improved since 2007. CityBus now has real-time departure and arrival information provide via text, desktop, and mobile devise. Real-time departure information is displayed at the Transit Mall for all agencies serving the Transit Mall. The system map and schedule handout were significantly revamped in 2017 with information in Spanish and English about important facilities and bike/pedestrian routes, frequency tables, service to SMART and other connecting agencies, and how to get real-time transit. Improvements were made to accessibility of the fixed route scheduling information for people with visual impairments.	
62	Reinstitute Golden Gate Transit route 90 bus service from Sonoma Valley to San Rafael & San Francisco	The Springs Community Based Transportation Plan	No project initiation	requires additional funding or reduction in other service

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
63	Maintain existing levels of transit service	The Springs Community Based Transportation Plan	Local transit service that was in place during the development of the CBTP has been maintained.	
64	Increase frequency of route 32 buses to/from The Springs and Sonoma	The Springs Community Based Transportation Plan	No project initiation	requires additional funding or reduction in other service
65	Increase frequency of route 40 buses to/from The Springs & Petaluma, including Saturday service	The Springs Community Based Transportation Plan	Weekday service increased in 2017, but reverted to historic schedule during COVID-19	Service temporarily reduced due to COVID-19 impacts. Adding back additional peak service on Route 40 to be evaluated.
66	Increase frequency of route 30 buses to/from The Springs & Santa Rosa & Sonoma	The Springs Community Based Transportation Plan	Weekday service has decreased slightly while weekend service has increased to average one hour and forty-five minutes	Service temporarily reduced due to COVID-19 impacts. Adding back additional peak service on Route 30 to be evaluated.
67	Later Afternoon and/or evening bus service & expanded ADA paratransit service	The Springs Community Based Transportation Plan	Route 40 hours have expanded and now runs from 6:10am to 6:50pm	Service temporarily reduced due to COVID-19 impacts. Adding back evening service on Route 40 to be evaluated.
68	Implement a new weekday bus route between the cities of Sonoma & Napa	The Springs Community Based Transportation Plan	Napa Vine route 25 is no longer in service	Ridership was very low and there was a need to reallocate service elsewhere
69	Safe Routes to Schools program	The Springs Community Based Transportation Plan	El Verano Elementary School has participated in Safe Routes to School.	
70	Bicycle Education Campaign & Street Skills classes	The Springs Community Based Transportation Plan	The Bicycle Coalition has done community bike rodeos and tabling in the Springs area.	
71	Expand outreach & customer service efforts to potential & existing Latino bus patrons	The Springs Community Based Transportation Plan		

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
72	Provide incentives for businesses to provide safe & convenient bicycle parking	The Springs Community Based Transportation Plan	No project initiation	
73	Complete the Central Sonoma Valley Bikeway (Class I, multi-use path)	The Springs Community Based Transportation Plan	Feasibility Study for connecting Sonoma Valley Trail completed in 2016. Trail segments through Larson Park to Vailetti Dr complete.	Limited ROW and funding. ROW acquisitions in progress.
74	Enhance pedestrian crossings on Highway 12 at various locations	The Springs Community Based Transportation Plan	Significant improvements have been made to the Highway 12 streetscape in The Springs. A stop light and pedestrian crossings were added at Thompson, and crossings were added at Serra (between Arroyo and Calle del Monte) and at Central.	The Springs Specific Plan Discussion Draft includes a new crosswalk with pedestrian warning lights at the Sonoma Charter School and a new crosswalk, bulbouts, and warning lights at Donal Street after sidwalks are completed in area.
75	Complete Verano Avenue sidewalks from Highway 12 to Sonoma Creek	The Springs Community Based Transportation Plan	A Class 1 multi-iuse path was constructed from Verano and Main, where the sidewalk ends, to the Sonoma Creek bridge.	
76	Arnold Drive bicycle lanes from Agua Caliente Road to Country Club Drive	The Springs Community Based Transportation Plan	Planned for implementation, from Country Club Dr. to Madrone Rd. in FY 23/24.	
77	Agua Caliente Road bicycle lanes from Highway 12 to Arnold Drive	The Springs Community Based Transportation Plan	No project initiation	
78	Boyes Boulevard sidewalks from Highway 12 to Arnold Drive	The Springs Community Based Transportation Plan	Bridge replacement to open in July 2021. No initiation of sidewalk installation.	In some areas, adding sidewalks would require use of residential frontages and/or removal of street parking.
79	Pedestrian lighting on Highway 12 from Donald Street to Verano Avenue	The Springs Community Based Transportation Plan	Complete - Pedestrian lighting added	

#	Project Name	Neighborhood and Jurisdiction	Project Status as of June 2021	Status Reason
80	Agua Caliente Road side-walks from Highway 12 to Vailetti Drive	The Springs Community Based Transportation Plan	No project initiation	
81	Add pedestrian crossings on Verano Avenue at Riverside Drive	The Springs Community Based Transportation Plan	No project initiation	
82	Pedestrian Lighting Agua Caliente Road & Boyes Boulevard	The Springs Community Based Transportation Plan	No project initiation	
83	Install more shelters, benches & bike racks at bus stops	The Springs Community Based Transportation Plan	Stop fixtures continue to be improved and upgraded, including new shelters, benches, and trash bins since 2016.	

A-2 Travel Model Technical Summary

The Comprehensive Transportation Plan includes a performance assessment of transportation projects, programs, policies, and strategies. These projects and policies were identified in previous CTPs or other plans including local general plans, short range transit plans, the Regional Transportation Plan, through transportation research, or have been submitted by local project sponsors. The Sonoma County Travel Model, SCTM 2020, along with other off model tools and methods were used to perform the performance assessment.

I. THE SONOMA COUNTY TRAVEL MODEL (SCTM 2020)

SCTM 2020 is a travel demand model composed of a combination of digital databases, computer programs, and scientific theory. It is used to replicate the real world transportation system (roads, intersections, traffic control devices, congestion delays, transit use, road capacity, speed limits) in Sonoma County. The travel demand model can be used to forecast future travel patterns and demand based on changes to the transportation system (new roads, changes in capacity, etc.), land use (changes in residential densities, or locations, new job sites, etc.), or demographics (more or less people in a certain area).

SCTM uses a traditional four-step travel demand modeling process to estimate:

- How much travel is taking place? (Trip Generation)
- Where are people going? (Trip Distribution)
- What travel modes are people using to make their trips? (Mode Choice)
- What routes/facilities are being used? (Trip Assignment)

1. Data Requirements:

The two basic inputs for applying the travel demand model are:

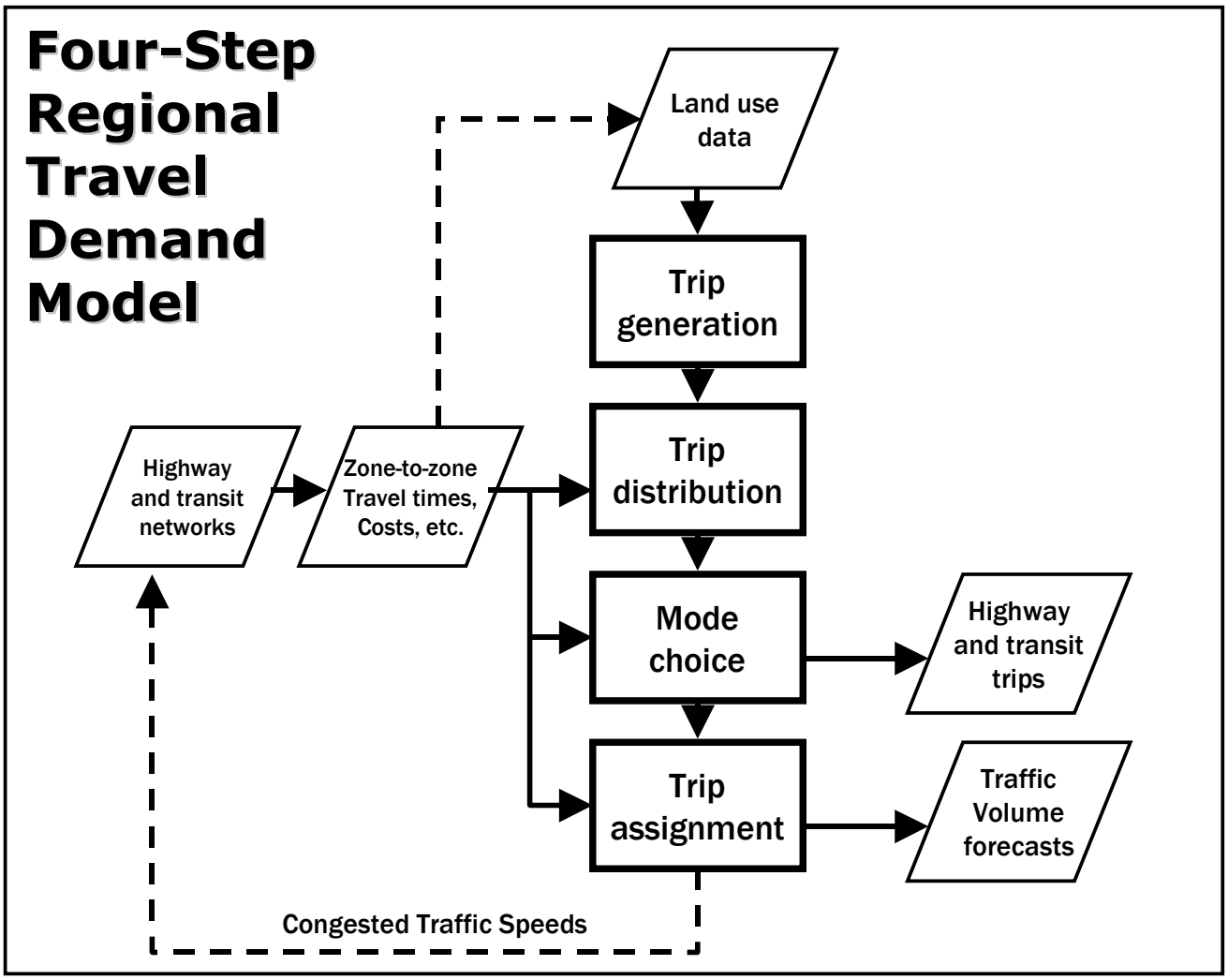
- Land use inputs, representing estimates of current and future development; and
- Transportation inputs or supply, including the current transportation network and planned changes (increases or decreases in capacity, new roads or highways, new transit lines)

These inputs are stored in a countywide GIS land use database and model networks and are assembled and updated in consultation with local jurisdictions.

2. Four-Step Modeling Process:

SCTA uses a traditional, four-step travel demand modeling process to replicate and forecast countywide travel behavior. These four steps are: Trip Generation, Trip Distribution, Mode Choice, and Trip Assignment steps (See Figure 1).

FIGURE 1. THE FOUR-STEP TRAVEL DEMAND MODELING PROCESS.



Trip Generation: How much travel?

Sonoma County is divided into over 800 traffic analysis zones (TAZs). A zone could be as small as a few city blocks (such as central Santa Rosa) or as large as 100 square miles in rural areas (such as northwestern Sonoma County).
The travel demand model estimates the number of trips going to and from each zone. Trips are divided by purpose — work trips, school trips, and other trips. Each of these zones attracts and produces a certain number of trips based on the amount of residential, office, industrial, recreation, and commercial development in the zone. Zones with high levels of residential development produce many trips, zones with high levels of commercial, office, or industrial development attract many trips.

The output of this step is a table summarizing the number of different types of trips produced by and attracted to each zone.

Trip distribution: who goes where?

Trip distribution allocates produced trips to zones that they are attracted to. For example, after the model estimates the number of commute trips produced by a zone in Windsor, this step matches these produced trips to other zones around the region, such as zones in Santa Rosa or other regional employment centers. These linkages are called origin/destination pairs. A mathematical gravity model is used to determine where trips are distributed. The larger two zones are in terms of employment and/or population, and the closer they are in distance, the more trips will likely be generated between them.

This step produces an origin/destinations table, which is a large matrix showing the estimated number of trips moving between the different zones.

Mode choice: how do people travel?

In the third step of the four-step modeling process the model uses observed travel mode shares to estimate which proportion of total trips are made using different modes of transportation such as driving alone, carpooling, taking transit, walking, or biking.

The output of this step is a breakdown of what travel modes are being used for different types of trips within the county.

Trip assignment: what routes do people take?

In this final step, the model selects the most likely path for each trip. The model assumes people will take the fastest route avoiding traffic and congestion where possible. Each trip is examined and a best path is determined while minimizing the time and distance needed to travel from zone to zone.

The final product of this step is a transportation network representing generalized countywide roadway, transit, and other transportation facilities with attached future travel and traffic estimates for specific road sections and ridership for transit routes.

II. PROJECTED CONDITIONS

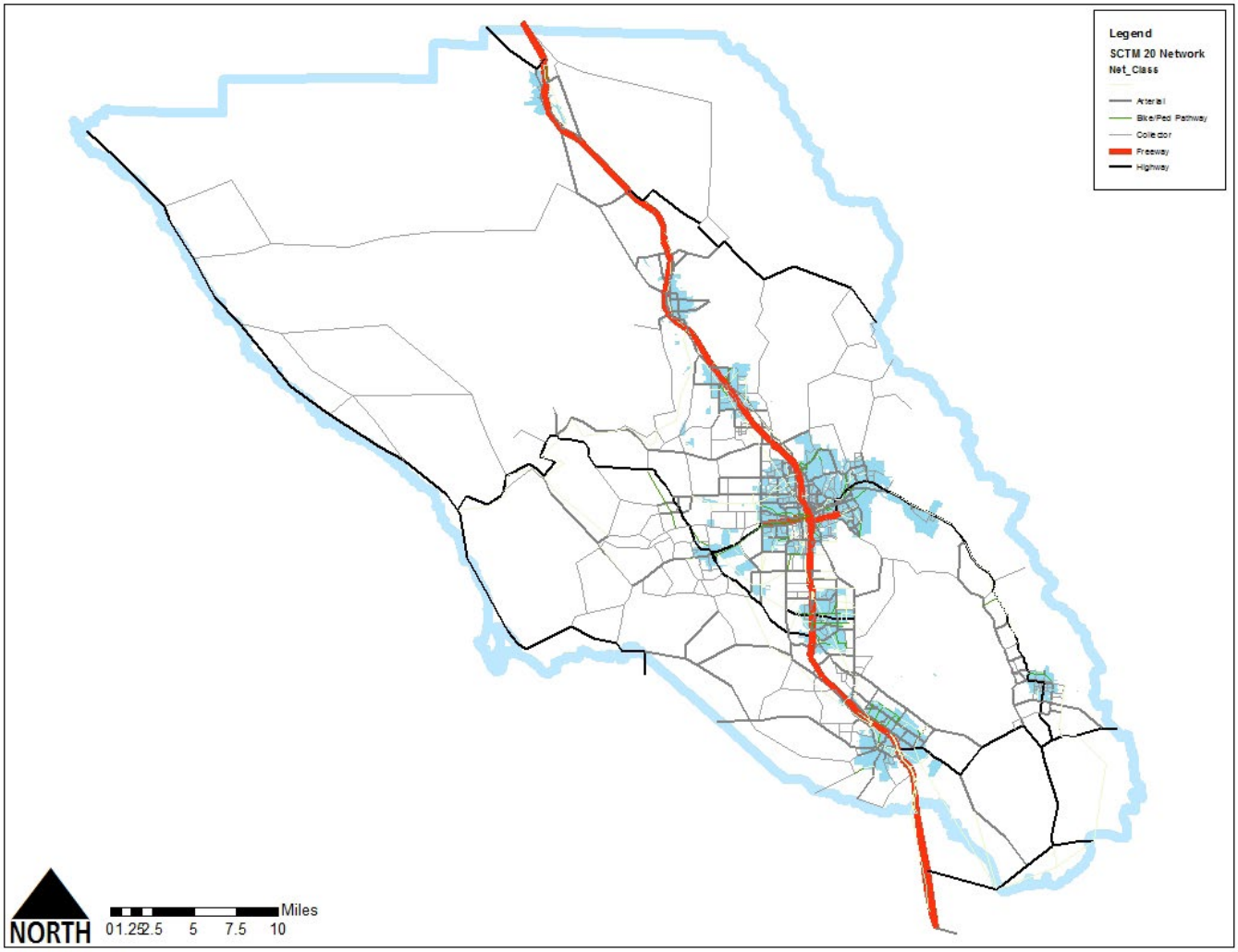
Staff and consultants have used real world traffic counts, mobile source data assembled as part of the Sonoma County Travel Behavior Study, and travel survey data to validate the SCTM and ensure accuracy for the model base year of 2015.

Demographic and Transportation System Assumptions

The socio-economic forecasts used in SCTM 2020 are based on projected buildout of local general and specific area plans. Staff worked with local planning agencies to review estimates of existing growth and to estimate and review future projected growth at the traffic analysis zone level. Analysis years are 2015, which provides an estimate of existing conditions and a variable future planning horizon which simulates local plan buildout.

Population and employment are projected to rise steadily in the future. Sonoma County's 2015 population of 502,000 is projected to increase to 622,000 by 2050, an increase of 120,000 persons, a 24% total increase or a roughly .7% increase per year. Employment is projected to grow from 217,000 in 2015 to 312,000 through general plan buildout. This represents a potential increase of 95,000 jobs, a 44% total increase, or a roughly 1.26% increase per year. Population and job growth are projected to be centered on the Highway 101 corridor and focused on

FIGURE 2. SCTM MODEL NETWORK



existing urbanized areas. Average household size was 2.6 persons per household in 2015, which is projected to increase to 2.7 persons per household in the future.

The SCTM generalizes the countywide transportation facilities as a transportation network (see figure 4). The 2015 model networks are based on networks created as part of the development of the original Sonoma County Travel Model (SCTM), Santa Rosa Travel Model, Rohnert Park Travel Model, Windsor Travel Model, and Petaluma Travel Model. Road and bicycle/pedestrian networks have been updated based on feedback from local engineering and public works staff. Transit route networks are based on GTFS (General Transit Feed Specification) data. GTFS feeds are regularly updated by transit providers and include information on routes, stop locations, headways, and fares. Transit networks were further checked against posted

transit route, stop, fare, and headway information posted by transit providers.

III. PRICING ASSUMPTIONS

The following pricing assumptions are used in SCTM 2020:

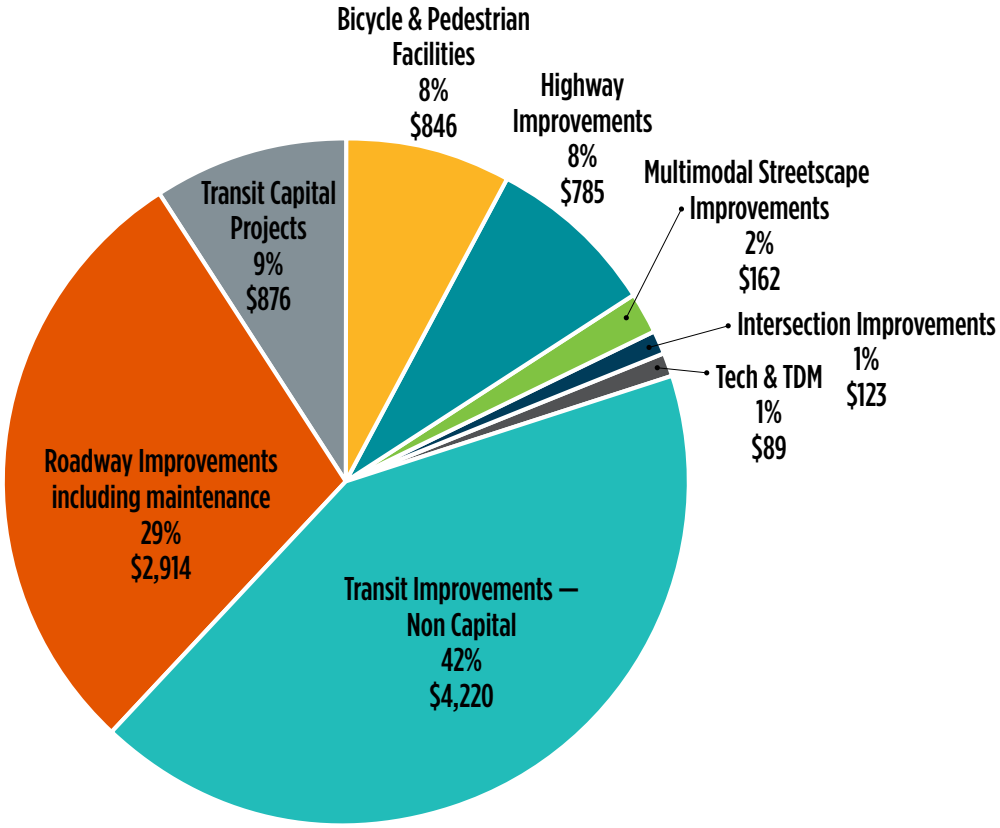
Automobile Operating Costs: Baseline 2015 perceived automobile operating cost is estimated at 18.91 cents per mile. This perceived operating cost is assumed to stay constant in the future. Fuel price fluctuations and increases are expected to be offset by improvements in vehicle fuel economy. Operating costs may be adjusted during scenario analysis to test potential pricing impacts on future travel.

Tolls: Toll costs are projected to keep pace with inflation (no increase or decrease in toll amounts).

Parking: Parking costs are assumed to keep pace with inflation. Parking costs may be adjusted to test potential pricing impacts on future travel.

Transit Fares: Transit fares are assumed to keep pace with inflation. Transit fares may be adjusted to test potential pricing impacts on future travel.

A-3
Project List



SUMMARY OF CTP PROJECTS

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Cloverdale	Bicycle and Pedestrian Facilities	Citrus Fair Drive Greenway Project	Complete bike & pedestrian connection from SMART Transit Center to Tarmen Neighborhood and South Cloverdale Blvd.	Citrus Fair Drive from South Cloverdale Blvd to Asti Road	$1
Cloverdale	Bicycle and Pedestrian Facilities	Cloverdale CBPMP Projects (total less than $1M each)	Total of Cloverdale bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$1
Cloverdale	Bicycle and Pedestrian Facilities	Cloverdale River Trail Extension	Complete bike and pedestrian paths along Crocker Road/First Street connecting River Road and the Cloverdale River Trail and Cloverdale Blvd.	River Rd @ Crocker Rd to Great Redwood Trail and Cloverdale Blvd. at First Street	$2
Cloverdale	Bicycle and Pedestrian Facilities	North Cloverdale Gateway Project	Complete bike and pedestrian enhance-ment on North Cloverdale Blvd. from the Highway 128 intersection to North Street.	North Cloverdale Blvd. from the Highway 128 intersection to North Street.	$2
Cloverdale	Bicycle and Pedestrian Facilities	Sidewalk & bike lane completion on Cloverdale Blvd.	Construct new sidewalks, pedestrian bridges and bike lanes along both sides of Cloverdale Blvd.	Cloverdale Blvd from northern City Limit to southern City Limit.	$2
Cloverdale	Bicycle and Pedestrian Facilities	Sidewalk improvements & traffic calming	Construct sidewalk bulb-outs and improve crossswalks on Cloverdale Blvd. from Lake Street to Franklin Street	Cloverdale Blvd from Lake Street to Franklin Street	$1
Cloverdale	Bicycle and Pedestrian Facilities	South Cloverdale Gateway Project	Complete bike and pedestrian enhance-ments at the South Cloverdale Blvd./ Highway 101 overcrossing	South Cloverdale Blvd./Highway 101 overcrossing	$5
Cloverdale	Bicycle and Pedestrian Facilities	South Cloverdale River Trail	Complete bike and pedestrian paths creating the South Cloverdale River Trail (Asti Road and river frontage) connecting to the Great Redwood Trail & Cloverdale Airport.	Asti Road and river frontage from Crocker Road/First Street to Cloverdale Airport	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Cloverdale	Bicycle and Pedestrian Facilities	South Downtown Multimodal Enhancement Project	Construct "Complete Streets" bike & pedestrian facilities by expanding side-walks, constructing new curb ramps, adding crosswalks and bike lanes	South Cloverdale Blvd between Lake Street and Franklin Street	$3
Cloverdale	Roadway Improvements	Cloverdale Downtown Complete Streets Improvement Project	Road surface & improvement project intended to extend the effective service	Multiple: Downtown streets including N. Cloverdale Blvd. from Railroad Ave. to Third Street, Commercial Street and Main Street	$1
Cloverdale	Roadway Improvements	Cloverdale Neighborhood Streets Reconstruction & Maintenance Pgm	Cloverdale Annual Rehabilitation Program for Local Streets , including slurry seals, seal cracks, asphalt overlays and reconstruction	Citywide	$25
Cotati	Bicycle and Pedestrian Facilities	Cotati CBPMP Projects (total less than $1M each)	Total of Cotati bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$1
Cotati	Bicycle and Pedestrian Facilities	West Cotati Avenue Sidewalks	Closing key gaps in sidewalk between 116 (site of significant pending commercial/ residential development) and a key east/ west pedestrian cooridor under US 101 at Clifford, including a school connection to Thomas Page Academy on West Cotati Avenue.	Hwy 116 to Clifford Avenue, West School Street from Richardson to Clifford Avenue.	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Cotati	Highway Improvements	Highway 116 Cotati Corridor Improvements	This project is a widening of Highway 116 between US 101 and Stony Point Road, including phased closure of driveway access to 116, the addition of signalized intersections, new bike lanes, and new side-walk to improve the vehicle LOS, improve the safety of 116 for all modes of transpor-tation, and create safe new corridors for pedestrian and bicyclists. Improvements to this State facility are identified in the adopted Bike and Ped Master Plan, as well as the City's General Plan.	Cotati, from US 101 to Stony Point Road	$15
Cotati	Multimodal Streetscape Improvements	La Plaza Reunification	Joining of all 4 legs of La Plaza Street around La Plaza Park, and re-routing vehicle and bicycle traffic around La Plaza Park to connections with Old Redwood Highway, West Cotati Avenue, West Sierra Avenue, and East Cotati Avenue. Project would re-create the central town plaza and encourage and activate a pedestrian and bicycle friendly downtown.	Old Redwood Highway @ East Cotati Avenue	$15
Cotati	Multimodal Streetscape Improvements	Old Redwood Hwy rehab — Plaza to Gravenstein Hwy	This project consists of widening Old Redwood Highway for safer bike lanes, sidewalks, and center island medians. Also includes various signal improvements to improve congestion.	Cotati, Old Redwood Highway between La Plaza Park and Highway 116.	$8
Cotati	Highway Improvements	US 101/Highway 116 North Bound On-Ramp Improvements	This project is the creation of traditional north bound on-ramp for US 101 at the interchange with Highway 116. Highway 116 currently circulates through city streets to reach the US 101 north bound on-ramp at the intersection of Commerce Boulevard and Old Redwood Highway. This project will create a new leg from the existing US 101 south bound off ramp to provide a safer and more efficient path for traffic on Highway 116.	Cotati, at the US 101 and Highway 116 interchange.	$10

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Cotati	Highway Improvements	US 101/West Sierra Avenue South Bound Off-Ramp Improvements	This project is the creation of a new south bound off ramp at West Sierra Avenue to improve transportation options for vehicles traveling south bound on US 101 by giving vehicles another option to access the Cotati/ southern Rohnert Park area, and relieving congestion at the US 101/116 interchange. Currently, no other south bound option exists between Highway 116 and Old Redwood Highway in Petaluma.	Cotati, at the US 101 and West Sierra Avenue interchange.	$10
Cotati	Roadway Improvements	Pavement Maintenance Program	Annual Rehabilitation Program for Local Streets in Cotati — $3.8M/yr is to reduce the backlog from $10.7M to $0.83M in the first 5 years ($19M total). Years 6-25, the on-going maintenance needs are about $1M/yr ($20M total). Total need for basic pavement maintenance over 25 years is $39M.	various streets in Cotati	$39
Healdsburg	Bicycle and Pedestrian Facilities	ADA Upgrades	Sidewalk repair, gap closures, and ramp upgrades.	City-wide	$8
Healdsburg	Bicycle and Pedestrian Facilities	Foss Creek Pathway Class II	Class 2 (Bike Lanes)	Healdsburg Ave. Northern City Limits to Grove St./Healdsburg Ave. Intersection	$1
Healdsburg	Bicycle and Pedestrian Facilities	Foss Creek Pathway Segment 0 — South City Limit to Bridge	Foss creek path current southerly terminus is Front Street. This project will take the path across R/R tracks and front street (possible mid block crossing) and create a pathway through Railroad Park and connect to the Healdsburg Avenue Bridge over the Russian River.	Southern City Limits on Healdsburg Avenue to Healdsburg Bridge	$2
Healdsburg	Bicycle and Pedestrian Facilities	Foss Creek Segments 9 & 10	Construction of Class 1 pathway (ped and bike)	From terminus of Segment 8 at the intersection of Grove and HBG Ave to the City Limit	$4

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Healdsburg	Bicycle and Pedestrian Facilities	Healdsburg CBPMP Projects (total less than $1M each)	Total of Healdsburg bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$8
Healdsburg	Intersection Improvements	Dry Creek Road Improvements	Reconstruct and partially widen Dry Creek to implement street curbs, sidewalks, enhanced safety pedestrian crossing class 1 pathway and lane reconfiguration; reconstruct and widen north half of Grove St/ Dry Creek Rd intersection.	Dry Creek Road: from Healdsburg Avenue intersection to Hwy 101 interchange under-crossing.	$7
Healdsburg	Multimodal Streetscape Improvements	Grove Street Neighborhood Plan Implementation — Complete Streets	Road improvements including curb, gutter, sidewalk, and bike facilities. Complete street project.	Grove Street between Grant Street and Dry Creek Road.	$3
Healdsburg	Multimodal Streetscape Improvements	Healdsburg Avenue Complete Street Improvement Powell to N CityLim	Road diet, bicycle facilities, pedestrian improvements, enhanced safety, and streetscape. Complete street project.	Within existing public Right-of-Way, from Powell Avenue to the Northern City Limits.	$10
Healdsburg	Multimodal Streetscape Improvements	Healdsburg Avenue-Mill Street Improvements	Reconstruct Healdsburg Avenue to re-align street curbs, reduce number of vehicle lanes, implement parking, landscaped center medians, sidewalks and other pedestrian features. Mill Street reconstruction and partial widening to implement street curbs, sidewalks, and possibly lane reconfiguration.	Healdsburg Avenue: from Mill St/Vine St (5-way intersection) to Exchange Ave. Mill Street: from Healdsburg Ave/ Vine St (5-way intersection) to Hwy 101 under-crossing	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Healdsburg	Multimodal Streetscape Improvements	Healdsburg Plaza Streetscape Rehabilitation	Streetscape project to improve safety and remove ADA barriers on all walkways within the Healdsburg Plaza extending down Center Street up to and include Police Department frontage.	All walkways within the Healdsburg Plaza extending down Center Street upto and include Police Department frontage	$2
Healdsburg	Intersection Improvements	US-101 Central Healdsburg Offramp Improvements (Roundabout)	The Northbound 101 offramp crosses Soutbound Healdsburg Avenue (stop sign) creating a unique traffic situation. The Central Healdsburg Area Plan calls for a roundabout at this location.	Northbound US 101 offramp at Central Healdsburg	$10
Healdsburg	Highway Improvements	US-101 Mill Street Interchange	Complete full interchange by adding SB on and NB off ramps to create diamond interchange with existing SB off and NB onramps.	Mill Street and US-101	$25
Healdsburg	Roadway Improvements	Pavement Maintenance Program			$22
Petaluma	Bicycle and Pedestrian Facilities	Class 2 bicycle lane segments citywide	Class 2 bike lanes throughout Petaluma	Petaluma	$1
Petaluma	Bicycle and Pedestrian Facilities	Lynch Creek Trail Rehabilitation	Project includes the reconstruction of Lynch Creek Trail which includes a 10' wide concrete multi use trail, signing striping and new lighting	Lynch Creek Trail from Prince Park to the Petaluma River	$7
Petaluma	Bicycle and Pedestrian Facilities	Petaluma CBPMP Projects (total less than $1M each)	Total of Petaluma bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$37
Petaluma	Bicycle and Pedestrian Facilities	Petaluma River Trail	Construct a multi-use bicycle and pedestrian path from shollenber Park to the NWP trail at the petluma River including path and under the SMART rail line and Highway 101	Shollenberger Park to the NWP trail at the petluma River including path and under the SMART rail line and Highway 101	$15

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Petaluma	Roadway Improvements	Caulfield Lane Reconstruction	Project includes the reconstruction of Caulfield Lane from Highway 101 to Garfield Drive which will also include the installation of curb ramps, new traffic signal detection cameras and striping.	Caulfield Lane	$4
Petaluma	Highway Improvements	D Street Reconstruction	Project includes the reconstruction of D Street from Windsor Drive to Petaluma Boulevard South which will also include the installation of curb ramps, new traffic signal detection cameras and striping.	D Street	$4
Petaluma	Roadway Improvements	East Washington Street Reconstruction	Project includes the reconstruction of East Washington Street from Hwy 101 off Ramp to Bodega Avenue which will also include the installation of curb ramps, new traffic signal detection cameras and striping.	D Street	$8
Petaluma	Roadway Improvements	Petaluma Crosstown Connector and Rainier Interchange	Extend Rainier Ave to cross highway 101 and terminate at Petaluma Blvd North. Construct interchange with highway 101 and Rainier Ave extension	from Rainier Ave to Petaluma Blvd North, crossing highway 101	$115
Petaluma	Roadway Improvements	Southern Crossing at Caulfield Lane	Construct extension of Caulfield Lane to cross the Petaluma River and terminate at Petaluma Boulevard South	the southern end of the City of Petaluma to cross the Petaluma River	$72
Petaluma	ITS & New Technologies	Traffic Signals ITS Upgrades	Project includes the installation of fiber optic interconnect communication, upgrading traffic controllers with adaptive upgrades, advanced detection system for automated traffic signal performance measures and the installation of battery backup systems to create a comprehensive transportation network that is intelligent, scalable, flexible and resilient during a natural disaster.	City of Petaluma	$10
Petaluma	Roadway Improvements	Washington Street Bridge Seismic Retrofit	Seismically retrofit the Washington Street bridge	Washington Street over the Petaluma River, between Water Street and Grey Street	$4

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Petaluma	Roadway Improvements	Various Pavement Maintenance Projects	Overlays, reconstruction, rehabilitation of the existing street system	various locations	$125
Petaluma Transit	Transit Capital Projects	Bus Replacements (transitioning toward zero emissions fleet by 2029)	Routine replacement of Petaluma Transit and Petaluma Paratransit revenue vehicle fleet, following FTA useful life cycles and via MTC's TCP process	Petaluma	$17
Petaluma Transit	Transit Improvements — Non Capital	Fare Free Program	Discounted or fare-free programs system-wide or for specific groups, such as K-12, seniors, low-income, weekend pilot, summer pilot, or paratransit riders.	Petaluma, CA	$14
Petaluma Transit	Transit Capital Projects	Fleet Expansion	Fleet expansion for fixed route and paratransit service in order to offer more service and meet growing demand.	Petaluma	$5
Petaluma Transit	Transit Capital Projects	Ongoing Bus Stop Improvements	Addition of shelters, benches, trash cans, real-time information displays, concrete accessibility pads, solar security lighting, maps, infoposts, etc. at various existing bus stops in Petaluma.	Petaluma	$10
Petaluma Transit	Transit Improvements — Non Capital	Petaluma Transit — Ongoing Operations	Operating costs for Petaluma Transit and Petaluma Paratransit, based upon September 2019 service levels and costs.	Petaluma	$84
Petaluma Transit	Transit Improvements — Non Capital	Service expansion	Service expansion including increased service and span on major routes & arterials, additional weekend and holiday service, additional west side and school tripper service, Phase I BRT implementation on E. Washington.	Petaluma	$56
Petaluma Transit	Transit Capital Projects	Transit Fleet & Facility Electrification (transitioning toward zero emissions fleet by 2029)	Purchase of Battery Electric Fixed Route and Paratransit buses (differential cost), facility charging infrastructure, purchase of Evergreen power, solar array, and backup generator.	Petaluma, CA	$16

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Petaluma Transit	ITS & New Technologies	Transit Innovation Projects	Innovative transit projects using new technology to serve new markets, including micro-transit, TNC partnership, automated vehicle pilot program, AVL upgrades, and school tripper technology.	Petaluma, CA	$15
Petaluma Transit	Transit Capital Projects	Transit Maintenance, Operations & Admin Facility Rehab, Phase IV	Improves security, safety, and accessibility by rehabilitating the Petaluma Transit MO&A yard and entry points.	555 N. McDowell Blvd. Petaluma, CA 94954	$1
RCPA	Bicycle and Pedestrian Facilities	Countywide Bicycle and Pedestrian Signage Program	Develop and implement a countywide bicycle and pedestrian signage program based on recommendations in the SCTA Countywide Bicycle and Pedestrian Master Plan, 2014 Update. Program would facilitate and encourage bike/ped access to/from major centers of activity (SMART, transit hubs, employment centers, shopping centers, schools).	Countywide	$1
RCPA	Travel Demand Management	GreenTRIP Sonoma County	Customize and pilot use of one or more GreenTRIP tools in Sonoma County (certification program, parking database, connect). www.transformca.org/landing-page/greentrip	Pilot jurisdiction(s) to be determined	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
RCPA	Emission Reduction Technologies	Rural EV Charger Network	Develop a network of EV charging stations on government-owned properties outside of major city centers at locations that may not receive traditional grant funding due to being outside of long-standing cell-coverage zones required for grant-mandated network chargers and/or would require match funding that is currently a barrier for access to grant funding. A methodology developed by the County of Santa Clara Office of Sustainability indicate that non-residential public EV chargers that are available 7 days/week reduce 6.77 MTCO2e/year. www.sccgov.org/sites/dnz/Documents/Task-3D-EV-Charging-Stations-as-GHG-Mitigation-Mechanism-under-CEQA_White-Paper.pdf Location: Identified government-owned locations for 280 charging ports include: Cloverdale Park & Ride, Geyserville Park & Ride, Guerneville Park & Ride, Ragle Ranch Regional Park, Healdsburg Veterans Memorial Beach Regional Park, Los Guilicos Juneville Hall Facilities, Penngrove Park & Ride, Boyes Hot Springs Park & Ride, Tom Schopflin Fields Regional Park, Cotati Park & Ride #1, Healdsburg Park & Ride, Occidental Community Center, Shiloh Ranch Regional Park, Spring Lake Regional Park Upper Lot Shady Oaks, Taylor Mountain Regional Park, North Sonoma Mountain Regional Park, Maxwell Farm Regional Park, Cotati Park & Ride #2, Spring Lake Regional Park Lower Parking Lot, Sebastopol Park & Ride, Schellville Park & Ride, Occidental Park & Ride East Upper Lot #2, Monte Rio Recreation And Park District, Monte Rio Creekside Park, Helen Putnam Regional Park, Gualala Point Regional Park, Fulton Park & Ride, River Keeper Stewardship Park, Stillwater Cove Regional Park	Various — see description	$6

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Rohnert Park	Bicycle and Pedestrian Facilities	Central Rohnert Park PDA Complete Streets Improvements	Various improvements within the Central Rohnert Park Priority Development Area to improve active and multi-modal transportation, including but not limited to: enhanced pedestrian/bike crossings or infrastructure (over- or under-crossings or bridges) at arterials and/or the SMART rail line; traffic calming devices; traffic signal detection and/or ped/bike actuation; median, sidewalk, curb and gutter improvements including bulbouts, pedestrian safety islands; striping and pavement markings; street furniture and amenities including bike storage; bus stop amenities; wayfinding signage.	Various locations in Central Rohnert Park PDA, bounded by Highway 101 on the west, SMART railroad on the east, and Avram Avenue on the south	$6
Rohnert Park	Bicycle and Pedestrian Facilities	Enhanced Bike/ Pedestrian Crossings at NWP Railroad	Enhanced Bike/Pedestrian Crossings at NWP Railroad	Intersection of NWP Railroad (SMART Rail) at Southwest Boulevard, Rohnert Park Expressway, Hinebaugh Creek, and Golf Course Drive	$2
Rohnert Park	Bicycle and Pedestrian Facilities	Highway 101 Bicycle/ Pedestrian Crossing	Bike/pedestrian bridge crossing of Highway 101, location to be determined through Measure M funded feasibility study	TBD	$7
Rohnert Park	Bicycle and Pedestrian Facilities	New Bike/ Pedestrian Path Crossing Hwy 101 at Hinebaugh Creek	Bike/pedestrian over- or under- crossing of Highway 101 at Hinebaugh Creek, from approximately Commerce Boulevard (west of Highway 101) to approximately Redwood Drive (east of Hwy 101)	Hinebaugh Creek at Hwy 101	$5
Rohnert Park	Bicycle and Pedestrian Facilities	Rohnert Park CBPMP Projects (total less than $1M each)	Total of Rohnert Park bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$12

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Rohnert Park	Bicycle and Pedestrian Facilities	Rohnert Park Class I Bike Paths Reconstruction	Reconstruction of existing Class I bike paths, replacing existing asphalt paths with concrete, at various locations in Rohnert Park.	Bike paths in Rohnert Park along Copeland Creek, Hinebaugh Creek, Five Creek, Crane Creek, Labath Creek, Commerce Boulevard, Camino Colegio	$14
Rohnert Park	Bicycle and Pedestrian Facilities	Trail to Crane Creek Regional Park	Construction of a multi-use trail connecting Water Tank No. 8 service road east of Petaluma Hill Road to Crane Creek Regional Park.	Water Tank #8 Service Road to Crane Creek Regional Park	$3
Rohnert Park	Roadway Improvements	Bodway Parkway Extension	Extension of Bodway Parkway between Valley House Drive and East Railroad Avenue. The extension will include two travel lanes, a Class II bikeway on both sides of the street, sidewalks and a land-scape strip.	Bodway Parkway, between Valley House Drive and East Railroad Avenue	$4
Rohnert Park	Intersection Improvements	Bodway Parkway Roundabouts	Construction of new roundabouts	Bodway Parkway & Valley House Drive, Bodway Parkway & East Cotati Avenue	$8
Rohnert Park	Intersection Improvements	Camino Colegio Corridor Roundabouts	Construction of new roundabouts	Bodway Parkway & Camino Colegio, Mitchell Drive & Camino Colegio	$6
Rohnert Park	Roadway Improvements	Central Rohnert Park PDA — Rohnert Park Expressway Slip Streets	Four slip streets on both sides of Rohnert Park Expressway between Commerce Boulevard and SMART Railway, each consisting of 10' vehicular travel lane, 18' diagonal parking lane, and 8' concrete bike path	Parallel to Rohnert Park Expressway between Commerce Boulevard and State Farm Drive, and State Farm Drive and the SMART Railway.	$4

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Rohnert Park	Roadway Improvements	Central Rohnert Park PDA – Commercial Connector Street Completion	Extension of City Center Drive between State Farm Drive and Commerce Boulevard (currently "Padre Center Parkway"); new street connecting Rohnert Park Expressway to City Center Drive; new street connecting Rohnert Park Expressway; three traffic signals; widening of Commerce Boulevard Bridge over Hinebaugh Creek	Driveway of Padre Park Center between Commerce Boulevard and State Farm Drive, and between State Farm Drive and Hunter Drive, south of Rohnert Park Expressway.	$6
Rohnert Park	Intersection Improvements	Central Rohnert Park PDA Roundabouts	Construction of two roundabouts in Central Rohnert Park PDA	State Farm Drive & Enterprise Drive, State Farm Drive & Commerce	$7
Rohnert Park	ITS & New Technologies	Citywide Advanced Traffic Management System (ATMS) Implementation	Implementation of Citywide ATMS at 26 of 38 existing intersections (including cabinet and detection replacement/upgrade; ATMS infrastructure/software, programming) and installation of 6.7 miles of fiber or copper in new interconnect conduit.	Citywide	$6
Rohnert Park	Roadway Improvements	Dowdell Avenue Extension	Extension of Dowdell Avenue between Wilfred Avenue and Business Park Drive. Includes 2 travel lanes, bridge improvement at Business Park Drive, traffic light / improvements improvements at intersection of Business Park Drive, Class II bike lanes on both sides, sidewalks and landscaping. This project will help complete a roadway segment that is the preferred route for SCT's buses	Dowdell Avenue, from Wilfred Avenue to Business Park Drive	$7
Rohnert Park	Roadway Improvements	Redwood Drive Bridge Replacement at Hinebaugh Creek	Redesign and replacement of vehicular bridge	Redwood Drive at Hinebaugh Creek	$10

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Rohnert Park	Roadway Improvements	Snyder Lane Widening – San Francisco Dr to Golf Course Dr	Retain west side travel lanes, landscaping, sidewalk, curb and gutter; demolish east side travel lane and bikeway and replace with new, expanded road section with two travel lanes, Class II bike lane, landscaping strip and sidewalk. Includes three bridge widenings at Hinebaugh Creek, Five Creek and Crane Creek.	Snyder Lane Widening, from San Francisco Drive to Golf Course Drive	$8
Rohnert Park	Intersection Improvements	Southwest Avenue Corridor Roundabouts	Construction of three roundabouts on Southwest Boulevard	Southwest & Commerce, Southwest & No Name Street, Southwest & Adrian Drive	$8
Rohnert Park	Roadway Improvements	Southwest Boulevard Corridor Improvements	Overlay and reconstruction of Southwest Boulevard and complete streets implementation as well as streetscape and urban design improvements to encourage bicycle and pedestrian use while accommodating vehicular traffic.	Bodway Parkway, between Valley House Drive and East Railroad Avenue	$2
Rohnert Park	Roadway Improvements	State Farm Drive Overcrossing	Overcrossing of Highway 101 between State Farm Drive and Business Park Drive consisting of bridge overpass with two (2) vehicular travel lanes, two (2) unprotected bike lanes, pedestrian access.	Between State Farm Drive/ Commerce Boulevard intersection on east side of Highway 101 and Business Park Drive/ Redwood Drive intersection west of Highway 101	$17
Rohnert Park	Roadway Improvements	Maintain Pavement System – Road Rehabilitation	Road reconstruction as necessary to maintain PCI between 66-80 for entire network over 25 years	Rohnert Park — citywide	$93
Rohnert Park	Roadway Improvements	Pavement Maintenance Program	Annual preventive maintenance program to maintain PCI between 66-80 for entire network over 25 years	Rohnert Park — citywide	$19

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Bicycle and Pedestrian Facilities	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update	Construct bicycle and pedestrian projects based on the results of the studies conducted in the Climate Adaptation, Technology and Innovative Solutions (Transportation Initiatives) programmatic project implementing Bicycle and Pedestrian Master Plan priorities	Citywide, such as Fourth St/College Ave, Stony Point Rd, Northeast connections and Roseland Creek trail.	$6
Santa Rosa	ITS & New Technologies	Climate Adaptation Technology Innovation Transport Initiatives	Programmatic efforts to address Climate adaptation — Improve transit corridor efficiency reducing per-trip travel time and per-capita CO2 emissions. Continue to implement emission reduction technologies to improve the flow of traffic and adapt to emerging technology related to mobility options (autonomous vehicles) with the deployment of ITS technology, upgraded signal controllers. Complete First Phase active transportation corridor studies identified in the Bicycle & Pedestrian Master Plan Update 2018 (BPMPU 2018) Implement Short term Implementation goals identified in the BPMPU 2018, such as Vision Zero, safe routes to school, first & last mile connections to transit & rail, regional bike share, bike & pedestrian safety & education activities. Ongoing programs to support these transportation initiatives. This project also includes intersection improvements, transit improvements, bicycle and pedestrians facilities and emission reduction technologies. Total cost estimate — $6.5	Corridors and intersections throughout the city, citywide programs	$7

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Bicycle and Pedestrian Facilities	East West Bicycle and Pedestrian Connections	Phase 1 — This project proposes to construct a bicycle and pedestrian over-crossing of US Highway 101 in northern Santa Rosa, connecting the Mendocino Avenue high-frequency transit corridor and Santa Rosa Junior College Campus with the Coddingtown Transit Hub and North Santa Rosa SMART Station area. This project has been identified as a high-priority project in City public engagement and planning processes for the past 25 years, and since 2010 substantial work has been completed to move the project forward towards the construction phase, including completion of a Caltrans Project Initiation Document (PID) and funding of the environmental and design phases of the project. With the 2017 initiation of SMART rail service to the North Santa Rosa Station within ½ mile of the proposed overcrossing, and concur-rent improvement of Santa Rosa CityBus bus service to the Mendocino Avenue Corridor and Coddingtown Transit Hub, this overcrossing has grown in importance for connecting bicyclists and pedestrians with important transit facilities to the east and west of US 101 in Santa Rosa. ($14.0 M) — 2022 Phase 2 — Construct a bike and pedestrian at grade crossing at Jennings Avenue @ SMART ($5.0 M) — 2025 Phase 3 — Install bike lanes on Steele Lane/Guerneville Road ($5.0 M) — 2030	Bicycle and Pedestrian bridge over Highway 101 connecting SMART station and Santa Rosa Junior College (SRJC), Jennings Avenue crossing at SMART, bicycle lane gap closures on Guerneville Road/Steele Lane	$24
Santa Rosa	Bicycle and Pedestrian Facilities	Santa Rosa CBPMP Projects (total less than $1M each)	Total of Santa Rosa bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$108

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Bicycle and Pedestrian Facilities	Southeast Greenway Multi Use Path and Crossings	Provide continuous pedestrian, bicycle, and non-motorized transportation connections from Spring Lake Regional Park to Farmers Lane and links to downtown Santa Rosa, surrounding neighborhoods and schools, and the regional trail system. This project could also include multimodal streetscape improvements at crossings.	The proposed project would result in a multi use pathway and crossings within the 57-acre area that spans a 1.9-mile linear path from Farmers Lane/ State Route (SR) 12 to Spring Lake Regional Park.	$20
Santa Rosa	Multimodal Streetscape Improvements	Southeast Santa Rosa Multi Modal Resiliency Corridor Enhancement — Bike/Ped	Phase 1 — Pedestrian and bicycle enhancements and safety enhancements at 4th Street and Hwy 12/Farmers Lane. ($8.0 M) — 2030 Phase 4 — Construct a shared use bike and pedestrian path (Taylor Mountain Regional Park Trail) from Bennett Valley Road/ Farmers Lane to Petaluma Hill Road/ Yolanda Avenue ($10.0 M) — 2045	Farmers Lane between the intersection of Bennett Valley Road and Farmers Lane and the intersection of Petaluma Hill Road and Yolanda Avenue, Yolanda Avenue between Petaluma Hill Road and Santa Rosa Avenue, Fourth Street at Farmers Lane and Taylor Mountain Regional Park Trail parallel to Farmers Lane	$18
Santa Rosa	Roadway Improvements	Bellevue Avenue Improvements	This project would construct one travel lane in each direction plus a center turn lane or median from Stony Point Road to Santa Rosa Avenue with overcrossing at Highway 101. Project would add bike lanes and sidewalks. It would also realign the western portion of the corridor to align with Ludwig Avenue.	Bellevue Avenue from Santa Rosa Avenue to Stony Point Road	$40

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Roadway Improvements	Chanate Road — Resiliency Corridor	The scope of this project includes:Fire evacuation route (Mendocino Avenue to Parker Hill Road) includes roundabout @ Parker Hill Rd and Chanate Rd and modifying existing median.	Chanate Road from Mendocino Avenue to Parker Hill Road	$13
Santa Rosa	Roadway Improvements	Community Evacuation Routes	This project would modify existing roadways to enhance evacuation strategies in the event of a disaster primarily on arterials associated with wildland urban interface (WUI) areas. This project could also include intersection improvements	Citywide arterials associated with wildland urban interface areas, such as Fountaingrove Parkway, Montgomery Drive, Piner Road	$20
Santa Rosa	Multimodal Streetscape Improvements	Downtown Connectivity to Support Housing Density Intensification	Projects to be determined pending City Council approval early 2020, possible multi modal transportation projects that address climate adaptation, housing intensification and financial stability could include Fourth Street, Sixth Street, Third Street, B Street, Healdsburg Avenue, Mendocino Avenue streetscape. (In addition to the project type selected below the project could include the following components — Bicycle and pedestrian, ITS and new technologies, TDM, transit, intersection improvements).	Within the Downtown Station Area Specific Plan boundary	$25
Santa Rosa	Roadway Improvements	Dutton Meadows from Hearn Ave to Bellevue Ave	Widen and reconstruct, construct sidewalks and bike lanes	Dutton Meadows from Hearn Ave to Bellevue Ave	$7
Santa Rosa	Roadway Improvements	Fresno Avenue extension from Northpoint Pkwy to Ludwig Ave	Construct new road between Northpoint Parkway and Ludwig Avenue, sidewalk and bike lanes	Fresno Avenue from Northpoint Pkwy to Ludwig Avenue	$8
Santa Rosa	Roadway Improvements	Fresno Avenue from Northpoint Pkwy to Finley Avenue	Construct new road between Northpoint parkway and Finley Avenue.	Fresno Ave from Northpoint Pkwy to Finley	$8

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Highway Improvements	Fulton Road Interchange @ Hwy 12 — Phase 2	Convert the existing signalized intersection of Fulton Road and Highway 12 into a full interchange (including sidewalks and bike lanes)	Fulton Road Interchange @ Hwy 12	$50
Santa Rosa	Highway Improvements	Hwy 101 Corridor Interchange Improvements	Phase 1 — Reconstruct the over crossing and interchange at Hearn Avenue and Highway 101, including the addition of turn lanes, bike lanes and sidewalks. ($28.0 M construction phase) — 2022 Phase 2 — Reconstruct the over crossing and interchange at Mendocino Ave/ Hopper Ave and Highway 101, including the addition of turn lanes, bike lanes and sidewalks as part of the recovery and resiliency and financial stability efforts $40.0 M — 2040 Phase 3 — Expand bike, pedestrian, transit, and vehicle improvements across Hwy 101 in south Santa Rosa at Bellevue Avenue and Highway 101 so that mobility options are available to all south Santa Rosa neighborhoods, an under served area, and encourage a healthy climate for business and growth. $30.0 M — 2040	Hearn Ave, Mendocino Ave/Hopper Ave, Bellevue Ave,interchanges @ Hwy 101	$98
Santa Rosa	Roadway Improvements	Kawana Springs Road widen Santa Rosa Avenue to Petaluma Hill Rd	Widen road, construct sidewalks and bike lanes	Kawana Springs Road widen Santa Rosa Avenue to Petaluma Hill Rd	$5
Santa Rosa	Roadway Improvements	Maintain Transportation System — Road Rehabilitation	Rehabilitate existing transportation system in a state of good repair Citywide (reconstruction, thin mill overlay, full depth reclamation. Street Saver 25 years unconstraint PCI 63–73	Citywide	$410

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Roadway Improvements	Northpoint Parkway Improvements Bellevue Avenue to S.Wright Road	This project would construct a new roadway connection from Fresno Avenue to S. Wright Road and construct a new roadway from Stony Point Road to Dutton Avenue. The improvements will include sidewalk and bike lanes. Intersection improvements will also be part of the project.	Northpoint Parkway from S. Wright Road to Bellevue Avenue	$25
Santa Rosa	Roadway Improvements	Northpoint Pkwy — Extend from Fresno to S. Wright	Construct new road between Fresno and S. Wright Road	Stony Point Rd from Hearn Ave to Santa Rosa City Limits	$11
Santa Rosa	Roadway Improvements	Petaluma Hill Road widen Aston Ave to Santa Rosa City limit	Widen road, construct sidewalks and bike lanes	Petaluma Hill Road from Aston Ave to Santa Rosa City limit	$25
Santa Rosa	Roadway Improvements	Piner Road widen Marlow Road to Fulton Road	Widen to four lanes including sidewalks and bike lanes	Piner Road from Marlow Road to Fulton Road	$32
Santa Rosa	Roadway Improvements	Roberts Avenue Improvements	This project would extend Roberts Avenue under Highway 12 connecting to the existing roadway on the north and south side of Highway 12.	Roberts Avenue existing roadway segment south of Highway 12 to the existing roadway segment north of Highway 12	$20
Santa Rosa	Roadway Improvements	Sebastopol Road Corridor Plan widen Dutton Ave to Stony Point Rd	Construct travel lanes in each direction, widen sidewalks, bike lanes, center turn lane or medians, street furniture. This project also includes multi modal streets-cape improvements	Sebastopol Road Corridor Plan from Dutton Avenue to Stony Point Road	$27
Santa Rosa	Roadway Improvements	Sebastopol Road Corridor Plan widen Olive Street to Dutton Avenue	travel lanes, wide sidewalks, bike lanes, center turn lane or medians, street furniture	Sebastopol Road Corridor Plan from Olive Street to Dutton Avenue	$15

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa	Multimodal Streetscape Improvements	Southeast Santa Rosa Multi Modal Resiliency Corridor Enhancement — Road	Phase 2 — Improve and widen Yolanda Avenue between Petaluma Hill Road and Santa Rosa Avenue including 2 travel lanes in the westbound direction and one travel lane in the eastbound direction with a center two way left turn lane, adding bike lanes and sidewalks. ($20.0 M) — 2035 Phase 3 — Construct Farmers Lane from Bennett Valley Road and Farmers Lane to Petaluma Hill Road at Yolanda Avenue. The project will include sidewalks, bike lanes, transit route and serve as an evacuation route. ($46.0 M) — 2030	Farmers Lane between the intersection of Bennett Valley Road and Farmers Lane and the intersection of Petaluma Hill Road and Yolanda Avenue, Yolanda Avenue between Petaluma Hill Road and Santa Rosa Avenue, Fourth Street at Farmers Lane and Taylor Mountain Regional Park Trail parallel to Farmers Lane	$66
Santa Rosa	Roadway Improvements	Stony Point Road widen from Hearn Ave to Santa Rosa City limit	Widen to four lanes including sidewalks and bike lanes	Stony Point Rd from Hearn Ave to Santa Rosa City Limits	$20
Santa Rosa	Roadway Improvements	W. College Avenue widen Fulton Road to Stony Point Road	Widen and reconstruct (includes storm drain), construct sidewalks and bike lanes	W. College Ave Fulton to Stony Point Rd	$9
Santa Rosa	Roadway Improvements	West Avenue reconstruct and widen Sebastopol Road to South Avenue	Widen and reconstruct, construct side-walks and bike lanes	West Ave from Sebastopol Rd to South Ave	$6
Santa Rosa	Roadway Improvements	Maintain Transportation System Pavement — Maintenance	Maintenance of pavement — slurry, crack seal — surface treatment	Citywide	$65

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa CityBus	Transit Improvements — Non Capital	Enhanced Core Network and Rapid Bus (operating)	50% increase in service hours to implement Reimagining CityBus phase II priorities and support City's downtown development vision. Includes additional 15 minute service on Santa Rosa Avenue and Sonoma Avenue (completing frequency upgrades on corridors identified for future Rapid Bus service), Saturday-level service until 11:00pm on most routes (Monday-Saturday), improved weekend service, targeted route restructuring/extensions for more direct service, targeted peak frequency improvements.	Santa Rosa Citywide	$201
Santa Rosa CityBus	Transit Capital Projects	Enhanced Core Network Part 1 of 3 (capital)— Fleet Expansion (transitioning toward zero emissions fleet by 2029)	10 new battery electric fixed-route buses, 2 new paratransit vehicles, and 2 new non-revenue vehicles, phased with operating expansion. Includes replacement of these vehicles in out years.	Santa Rosa Citywide	$20
Santa Rosa CityBus	Transit Capital Projects	Enhanced Core Network Part 2 of 3 (capital) — Facility Expansion	Transit Mall and Coddingtown Transit Hub Expansion; improved links to SMART stations; Park and Rides	Downtown Transit Mall, Coddingtown Transit Hub, SMART Stations, new Park and Ride locations	$15
Santa Rosa CityBus	Transit Capital Projects	Enhanced Core Network Part 3 of 3 (capital)— Rapid Bus planning, engineering, and infrastructure	Rapid Bus planning, engineering,technology, and infrastructure	Mendocino Avenue-Santa Rosa Avenue corridor, Sebastopol Road-Sonoma Ave. corridor; downtown Santa Rosa Station Area Plan improvements	$12
Santa Rosa CityBus	Transit Capital Projects	Facility Maintenance and Rehab	Facility maintenance and rehab, including ADA bus stop improvements	Santa Rosa Citywide	$7

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa CityBus	Transit Capital Projects	Fleet Replacement (transitioning toward zero emissions fleet by 2029)	Regular replacement of existing transit, paratransit, and non-revenue vehicles. Does not include incremental costs of transition to electric vehicles, which is included in new Transit Fleet Electrification project.	Santa Rosa Citywide	$89
Santa Rosa CityBus	Transit Improvements — Non Capital	New Mobility Projects	Funds innovative approaches including mobility on demand, shared mobility, or mobility as a service applications, as well as autonomous vehicle technologies.	Santa Rosa Citywide	$5
Santa Rosa CityBus	ITS & New Technologies	Passenger Information and Fare Payment Technology and Marketing	Includes deployment of additional real-time bus arrival signs, trip planning and mobile ticketing apps, new ticketing equipment, and future		
fare payment and passenger information technolo-gies, as well as relating marketing	Santa Rosa Citywide	$3			
Santa Rosa CityBus	Transit Improvements — Non Capital	Systemwide Fare-free Transit and Paratransit	Funds systemwide fare-free transit and paratransit services to increase transit ridership and mode share; support housing and affordability-related goals; and enable CityBus to reinvest funds currently spent on fare collection into improved service. Costs assume up to a 60% increase in paratransit demand due to free fares. This project is scalable, with several options for targeted fare-free or discount programs for K-12 students, low-income individuals, and seniors, as well as start-up funding for EcoPass unlimited ridership programs for residential or institutional partners.	Santa Rosa Citywide	$75

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Santa Rosa CityBus	Transit Improvements — Non Capital	Transit and Paratransit O&M	Transit O&M & Paratransit at existing LOS, including replacement of equipment	Santa Rosa Citywide	$528
Santa Rosa CityBus	Transit Capital Projects	Transit Fleet Electrification (transitioning toward zero emissions fleet by 2029)	Accelerates transition to all-electric transit and paratransit fleets by supporting purchase of battery-electric vehicles, deployment of charging infrastructure, and provisions for resiliency. With purchase of Sonoma Clean Power Evergreen power, Santa Rosa CityBus could be 100% carbon-free.	Santa Rosa Citywide	$30
SCTA	Bicycle and Pedestrian Facilities	Countywide Expansion of Micromobility and first/last mile	Expand Bikeshare and other shared micro-mobility to all communities in Sonoma County. Includes the development of a comprehensive micro-mobility strategy to increase access to clean, affordable, reliable transportation options for rural communities in Sonoma County. Research best practices and emerging trends in micro-mobility; identify potential solutions for different place types (small city; large city; etc.); identify implementation resources (funding, expertise, etc.).	Sonoma countywide	$90
SCTA	Bicycle and Pedestrian Facilities	Safe Routes to School	Safe Routes to School — 60 school locations in Sonoma County	60 Schools in Sonoma County	$26
SCTA	Transit Capital Projects	Countywide Microtransit	Countywide Microtransit (dynamic on-demand transit service using software similar to Uber-pool) program connecting to high frequency transit route, rail or major destinations	Sonoma Countywide	$2
SCTA	Travel Demand Management	Transportation Management	Development of a transportation management association (2-3 FTE plus volunteers) to provide a variety transportation demand management services to individual and groups of employers, institutions including, but not limited to: Sales and Promotion of TDM and transit products; Central Information source for VMT reducing options, and Management of funding and incentives.	Sonoma Countywide	$40

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
SCTA	Highway Improvements	Highway 116 Widening and Rehabilitation btwn Sebastopol & Cotati	Rehabilitate and widen State Route 116; involves realignment, new shoulders and intersection improvements at various locations.	from Elphick Road East of Sebastopol to Highay 101 in Cotati	$83
SCTA	Highway Improvements	Highways 116 and 121 Intersection Improvements	Intersection improvements will install a roundabout to reduce congestion and improve facilities for bicycles and pedestrians.	At the intersection of highways 116, 121, and Bonneau Road in Sonoma County southwest of the Sonoma.	$22
SCTA	Highway Improvements	Landscaping — Highway 101 HOV Corridor	Follow up landscaping for Highway 101 projects as outlined in the 2014 Highway 101 Corridor Landscaping & Tree Planting Plan. The Plan is available on SCTA's Web site at: www.sctainfo.org/reports/Highway_101_Corrider_Landscaping_and_Tree%20Planning_Plan/Highways_101_Corrider_Landscaping_and_Tree%20Planning_Plan_January_2014.pdf	Highway 101 from the southern Sonoma County line (PM 0.0) to Windsor (PM 30.0)	$18

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
SCTA	Highway Improvements	State Route 37 Corridor Protection & Enhancement Capital Project	Build a viaduct between Sears Point and Vallejo converting a 2 lane conventional highway to a 4 lane elevated expressway with a toll facility to provide traffic relief and protected access at certain locations; include bike and pedestrian pathways that link to and meet with the requirements of the San Francisco Bay Trail; and explore options for transit – bus and rail. Include extensive environmental benefits to tidal marshlands and related plant and animal species by removing the existing route that is currently atop an earthen berm. Protect a critical east-west travel corridor from sea level rise and major storm events while simultaneously helping to reduce impacts from those same events to other resources. Consists of the following components: 1) Highway 37 Improvements and Sea Level Rise Mitigation Environmental Only ($10 M) 2) Interim Segment B Project at Current Elevation ($149 M; 2023-2025) 3) Near-Term Operational Improvements: SR 121 intersection reconfiguration & eastbound lane drop extension ($21 M; 2023-2024)	Highway 37 begin PM SON 3.91 to SOL R6.95 (Segment B); additional work scope may need to include MP MRN 11.2 to SON 3.91 (Segment A)	$180
SCTA	Highway Improvements	U.S.101 / Railroad Avenue Improvements. Also Project #2001	Construct northbound onramp, south-bound onramp and southboud offramp. Intersection and Safety improvement on Railroad Ave from Stony Point Road to Petaluma Hill Road.	Highway 101 (PM 10 — PM 11) and on Railroad Avenue from Stony Point Road to Petaluma Hill Road.	$50

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
SCTA	Highway Improvements	Widen U.S.101 Marin Sonoma Narrows — Phase 2 (Sonoma)	Implement Marin Sonoma Narrows Phase 2 Projects (Sonoma County). Adds 1 HOV lane in each direction making the freeway 6 lanes wide. Realigns ramps at East Washington Street, Lakeville Highway, and Petaluma Blvd South Interchanges. Constructs northbound auxiliary lane between Lakeville Highway and East Washington Street.	Highway 101 from the southern Sonoma County line (PM 0.0) to Old Redwood Highway (PM 8.0)	$163
Sebastopol	Bicycle and Pedestrian Facilities	Alternate West Route to Sebastopol	Improve a west side routing to connect SR 116 south of Sebastopol with Bodega Highway west of Sebastopol utilizing a number of alternate routes such as Pleasant Hill Road, Bloomfield Road, and possibly others		$5
Sebastopol	Bicycle and Pedestrian Facilities	Bodega Avenue Curb Gutter and Sidewalk Improvements	Curb Gutter and Sidewalk Gap Closure	Bodega Avenue, North side, from Golden Ridge Avenue to Pleasant Hill Ave. North in the City of Sebastopol	$1
Sebastopol	Bicycle and Pedestrian Facilities	Class 1 bike lane to City Line	Class 1 bike lane parallel to Bodega Ave	Last block, Ragle to City Line at Atascadero Creek	$1
Sebastopol	Bicycle and Pedestrian Facilities	Libby Park Bike Lane	Add bike path across Libby Park to connect Washinton St to Pleasant Hill Rd.	Libby Park	$0
Sebastopol	Bicycle and Pedestrian Facilities	Sebastopol CBPMP Projects (total less than $1M each)	Total of Sebastopol bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$2
Sebastopol	Bicycle and Pedestrian Facilities	West Sebastopol Active Transport Plan	Bodega Ave — Ragle Road — Mill Station Road: Bicycle and pedestrian access — west route	Sebastopol and unincorporated county	$8
Sebastopol	Intersection Improvements	Bodega Avenue Intersections	Upgrade crosswalk protection systems	Ragle Rd, Robinson Rd, Florence Ave	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sebastopol	Roadway Improvements	Bodega Corridor Project	Repaving, add bike lanes, 3 sidewalk gap closures, roadway widening, shoulder stabilizing	Bodega Avenue between High St & Pleasant Hill Rd	$5
Sebastopol	Intersection Improvements	Intersection Control on Hwy 116 at 2 locations in Sebastopol	Traffic signals or roundabouts at two intersections on Hwy 116 in Sebastopol.	Healdsburg Avenue (SR 116) at Covert Lane, and Petaluma Avenue (SR116) at McKinley Street/ Laguna Park Way in the City of Sebastopol	$4
Sebastopol	Intersection Improvements	Signal at Fircrest and Gravenstein N (Sr116)	Add traffic signal at intersection	Fircrest Avenue	$0
Sebastopol	Intersection Improvements	Signal at Healdsburg-Murphy intersection	Add traffic signal at intersection	Murphy Avenue	$0
Sebastopol	Roadway Improvements	SR 116 Curb, Gutter & Sidewalk	Widen shoulder, construct curb gutter and sidewaks, relocate utilities and storm drains.	Healdsburg Avenue (SR 116), North side, from Live Oak Avenue to Soll Court in the City of Sebastopol.	$2
Sebastopol	Roadway Improvements	Willow Street extension	Extend willow 1 block east	Between S Main & Petaluma	$0
Sebastopol	Roadway Improvements	Pavement Rehabilitation Program	Annual Rehabilitation Program for Local Streets in Sebastopol — Raise PCI 5 points in 5 years	various in Sebastopol	$5
SMART	Bicycle and Pedestrian Facilities	SMART Pathway	Construction of Class 1 non-motorized pathway in discreet segments along and/ or within the SMART right-of-way YOE cost estimated at $40m.	SMART rail corridor	$40

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
SMART	Transit Capital Projects	First/Last Mile SMART Stations Capital Enhancments	Programmatic project at or around Sonoma County SMART stations. Projects at each station vary, may have multiple project sponsors and include, but are not limited to, station furniture additions, enhanced ADA-related accessibility features, landscaping enhancements, wayfinding, bicycle parking/sharing, real time transit signage, intermodal improvements, security enhancements and other capital improvements for programs such as car sharing.	10 SMART Stations within within Sonoma County (Cloverdale, Healdsburg, Windsor, Airport Boulevard, Guerneville Road, Railroad Square, Rohnert Park, Cotati, North Petaluma, Downtown Petaluma).	$88
SMART	Transit Improvements — Non Capital	First/Last Mile Transit Operations	Project Programmatic project to enhance local transit access to/from SMART Stations in partnership with bus operators and local jurisdictions. Multiple project sponsors and operators possible. Assumes an average of $1.5m per station per year for operating support to local transit providers. Figure has not been escalated and is shown in 2020 dollars.	10 Sonoma County Stations — Local Jurisdictions/ Transit Operators are project sponsors.	$450
SMART	Transit Improvements — Non Capital	Ongoing Operations (as funded by Measure Q and reauthorized)	Rail and Pathway operations	Cloverdale to Larkspur	$2,200
SMART	Transit Capital Projects	SMART Rail Expansion — Windsor to Cloverdale and Petaluma North	Rail improvements including second Petaluma Station and extensions from Windsor to Cloverdale (civil track, bridges, systems, vehicle and maintaince yard capacity and two rail stations).	SMART rail line from Windsor north to Cloverdale and in North Petaluma.	$375
SMART	ITS & New Technologies	SMART Rail Freight Improvements	Addition of rail freight spurs, including Positive Train Control systems, along the corridor, and other freight rail requirements along the corridor, including additional siding, track & road crossings, and upgrade to systems on the Brazos and Blackpoint bridges	SMART rail line from Napa County to the west and Marin County to the north.	$40

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
SMART	Transit Capital Projects	SMART Rail Operations Capacity Expansion	Additional capacity at SMART Rail Operations Center and/or other facilities along the corridor to accommodate maintenance equipment and additional SMART train sets. Includes expansion of non-revenue vehicle fleet for systemwide services.	Airport Boulevard facility with additional minor systemwide facilities along corridor.	$25
SMART	Transit Capital Projects	SMART Rail Operations Capacity Expansion — Rail Vehicles	Expand or enhance rail vehicle fleet with addition of cars to support deployed service levels, meet on time performance goals and increase train capacity for carrying riders comfortably.	Systemwide service.	$44
Sonoma	Multimodal Streetscape Improvements	Broadway (SR12) Streetscape Enhancements and Traffic Circulation	Enhance the Broadway streetscape to improve the pedestrian experience, provide sustainable landscaping, and increase public safety for pedestrians, bicyclists, and motorists.	Broadway (State Route 12) between Napa Street and MacArthur Street	$6
Sonoma	Bicycle and Pedestrian Facilities	Sonoma CBPMP Projects (total less than $1M each)	Total of Sonoma bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$1
Sonoma	Intersection Improvements	Intersection Improvements at SR12 Broadway and SR12 West Napa St.	Improve this 4-way Stop intersection currently operating at LOS D. The intersection creates many points of conflict and motorist confusion, due to long pedestrian crossings and very busy pedestrian traffic in front of the Historic Sonoma Plaza.	At the intersection of SR12 Broadway and SR12 West Napa Street.	$6
Sonoma	Intersection Improvements	Intersection Improvements at SR12 Sonoma Highway and West Napa St	Improve this misaligned signaled intersection to better allow pedestrian traffic and improve vehicular turning movements.	At the intersection of SR12 Sonoma Highway and SR12 West Napa St. and Riverside Drive and Staples egress.	$3
Sonoma	Intersection Improvements	Intersection Improvements at West Spain St. and Fifth St. West	Improve this 4-way Stop intersection currently operating at LOS E.	At the intersection of West Spain St. and Fifth St. West.	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma	Roadway Improvements	Safety Improvements at Fifth St. West	Resolve Safety problem primarily at the intersection of Fifth St. West and Studley St. and Safeway egress.	On Fifth St. West between West Napa St. and Oregon St.	$3
Sonoma	Roadway Improvements	Local Streets and Roads Rehabilitation	Rehabilitation of Local Streets and Roads per Pavement Management System.	Various Streets and Roads in the City of Sonoma.	$10
Sonoma County	Bicycle and Pedestrian Facilities	8th St. East	Construct 3.09 mile Class II bikeway	East Napa St. to State Hwy. 121	$2
Sonoma County	Bicycle and Pedestrian Facilities	8th Street East Corridor Improvements 1: Sonoma/ Schellville Trail	Connects the City of Sonoma bike path to the Sonoma County Bay Trail. Follows the abandoned railroad right of way. Regional Network	Sonoma City Limits to Dale Ave.	$7
Sonoma County	Bicycle and Pedestrian Facilities	Adobe Rd.	Construct 2.99 mile Class II bikeway	Old Redwood Hwy. to Lynch Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Alexander Valley Rd.	Construct 3.83 mile Class II bikeway	Healdsburg Ave. to State Hwy. 128	$3
Sonoma County	Bicycle and Pedestrian Facilities	Arnold Dr.	Construct 3.47 mile Class II bikeway	Country Club Dr. to Chauvet Rd.	$3
Sonoma County	Bicycle and Pedestrian Facilities	Bellevue Creek Trail and Connector	Provides Highway 101 overcrossing. Connects to Laguna de Santa Rosa Trail and Rohnert Park “F” section.	Petaluma Hill Rd. to Stony Point Rd. and connector to Rohnert Park City Limits	$2
Sonoma County	Bicycle and Pedestrian Facilities	Bennett Valley Rd.	Construct 2.08 mile Class II bikeway	Santa Rosa City Limits to Grange Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Bodega Ave.	Construct 2.08 mile Class II bikeway	King Rd. to Middle Two Rock Rd.	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	Bodega Bay Trail	Provides a 3 mile long Class I bike path alternative to Highway 1. 1.1 miles have been completed from Keefe Avenue to the Bodega Bay Community Center. The County will complete the remaining 1.9 miles.	Parallels the Highway 1 corridor starting at Keefe Avenue and ending the County's Birdwalk Coastal Access Trail	$8
Sonoma County	Bicycle and Pedestrian Facilities	Bodega Hwy. Class II bikelanes	Construct 4.76 mile Class II bike lanes on Bodega Hwy.	Sebastopol City Limits to Jonive Rd. and Bohemian Hwy. to Valley Ford — Freestone Rd.	$4
Sonoma County	Bicycle and Pedestrian Facilities	Cloverdale / Lake Sonoma Trail	Class I connection between Cloverdale adjacent to Dutcher Creek Road	Cloverdale City Limits to Lake Sonoma	$2
Sonoma County	Bicycle and Pedestrian Facilities	Cloverdale River Trail	Class I adjacent to Russian River. Connects to SMART Trail	Cloverdale City Limits to Theresa Dr.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Colgan Creek Trail Extension East and West	Connection between Santa Rosa and Taylor Mountain Regional Park, and SMART Trail to Laguna de Santa Rosa Trail along SCWA flood control channel.	Connections between Santa Rosa and Taylor Mountain Regional Park., and Todd Rd. to Laguna de S.R. Trail	$1
Sonoma County	Bicycle and Pedestrian Facilities	Copeland Creek Trail	Connects Sonoma State University to Crane Creek Regional Park	Rohnert Park City Limits to Crane Creek Reg. Park	$1
Sonoma County	Bicycle and Pedestrian Facilities	Crocker Road Bicycle/ Pedestrian Bridge	Bike/Pedestrian Bridge across Russian River	West end of Bridge to East end of Bridge	$2
Sonoma County	Bicycle and Pedestrian Facilities	Doran Beach Rd.	Construct 2.22 mile Class II bikeway	State Hwy. 1 to Jetty Campground	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	Dry Creek Rd. Class II bikelanes	Construct 10.07 mile Class II bikeway	Healdsburg City Limits to Skaggs Springs Rd.	$8
Sonoma County	Bicycle and Pedestrian Facilities	Dutch Bill Creek Trail	Class I along portions of North Pacific Coast Railroad right-of-way. Connects Occidental to Russian River Trail at Monte Rio	State Hwy. 116 to Graton Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Eastside Rd. Class II bikelanes	Construct 5.18 mile Class II bikeway	Old Redwood Hwy. to Trenton-Healdsburg Rd.	$4
Sonoma County	Bicycle and Pedestrian Facilities	Faught Rd. Class II bikelanes	Construct 2.55 mile Class II bikeway	Old Redwood Hwy. to Pleasant Ave.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Frei Rd. Class II bikelanes	Construct 1.41 mile Class II bikeway	State Hwy. 116 to Guerneville Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Geysers Rd. Class II bikelanes	Construct 2.59 mile Class II bikeway	River Rd. to Mendo. Co. Line	$2
Sonoma County	Bicycle and Pedestrian Facilities	Geyserville Ave. / Asti Rd. Class II bikelanes	Construct 7.76 mile Class II bikeway	Weidersheim Rd. to Airport Rd. and Lytton Springs Rd. to Canyon Rd.	$6
Sonoma County	Bicycle and Pedestrian Facilities	Laguna de Santa Rosa Trail	Construct segments of Laguna de Santa Rosa Trail (12.21 miles)	Rohnert Park City Limits to Hall Rd.	$5
Sonoma County	Bicycle and Pedestrian Facilities	Laguna de Santa Rosa Trail Extension	Connects end of Santa Rosa Creek Trail to Russian River	Santa Rosa Creek Trail to Riverfront Park (Eastside Rd.)	$2
Sonoma County	Bicycle and Pedestrian Facilities	Laguna Rd. / Old Trenton Rd. Class II bikelanes	Construct 1.39 mile Class II bikeway	Vine Hill Rd. to River Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Larkfield / Wikiup Trail	Provides Class I alternative to Old Redwood Highway between Windsor, Larkfield/Wikiup, and Santa Rosa. Regional Network	Windsor Town Limit to Santa Rosa City Limits	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	Ludwig Ave. Class II bikelanes	Construct 1.45 mile Class II bikeway	Llano Rd. to Stony Point Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Mark West Springs / Porter Creek Rd. Class II bikelanes	Construct 9.72 mile Class II bikeway	State Hwy. 101 to Petrified Forest Rd.	$7
Sonoma County	Bicycle and Pedestrian Facilities	Millbrae Ave. Class II bikelanes	Construct 1.31 mile Class II bikeway	Rohnert Park City Limits to Stony Point Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Mirabel Road Corridor Improvements 1: West County Trail Extension	Connects downtown Forestville with Forestville Youth Park	Pajaro Lane to Forestville Youth Park	$3
Sonoma County	Bicycle and Pedestrian Facilities	Mirabel Road Corridor Improvements 2: River Rd. to Hwy 116	Widening for pedestrian & bike facilities	River Rd. to Hwy 116	$12
Sonoma County	Bicycle and Pedestrian Facilities	Monte Rio / Willow Creek Trail	Provides access to Russian River between Monte Rio and Coast. Portions of trail flood, summertime use only.	Monte Rio Bridge to Sonoma Coast State Park	$3
Sonoma County	Bicycle and Pedestrian Facilities	Occidental Rd. Class II bikelanes	Construct 3.06 mile Class II bikeway	Sanford Rd. to Santa Rosa City Limits	$2
Sonoma County	Bicycle and Pedestrian Facilities	Pepper Rd. Class II bikelanes (section 1)	Construct 3.29 mile Class II bikeway	Meacham Rd. to Stony Point Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Pepper Rd. Class II bikelanes (section 2)	Construct 2.59 mile Class II bikeway	Bodega Ave. (Petaluma) to Meacham Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Petaluma — Novato Trail	Alternative to SMART Trail south of Petaluma proposed as part of Highway 101 Novato Narrows project	Petaluma City Limits to Marin Co. Line	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	Petaluma / Sebastopol Trail	Follows abandoned Petaluma and Santa Rosa Railroad right of way south of Highway 116 and west of Highway 101.	Petaluma City Limits to Sebastopol City Limits	$4
Sonoma County	Bicycle and Pedestrian Facilities	Petaluma Marsh Trail	Class I alternative route to Lakeville Highway Class II	Petaluma City Limits to Port Sonoma	$4
Sonoma County	Bicycle and Pedestrian Facilities	Petrified Forest Rd. Class II bikelanes	Construct 2.37 mile Class II bikeway	Porter Creek Rd. to Napa Co. Line	$2
Sonoma County	Bicycle and Pedestrian Facilities	Piner Rd. / Olivet Rd. Class II bikelanes	Construct 3.76 mile Class II bikeway	Fulton Rd. to River Rd.	$3
Sonoma County	Bicycle and Pedestrian Facilities	Pleasant Hill Rd. Class II bikelanes	Construct 2.16 mile Class II bikeway	Bloomfield Rd. to Elphick Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	Roblar Rd. Class II bikelanes	Construct 6.5 mile Class II bikeway	Valley Ford Rd. to Stony Point Rd.	$5
Sonoma County	Bicycle and Pedestrian Facilities	Russian River Trail	Regional Class I bike path along the middle and lower reach of the Russian River. The approximate length is 23 miles.	Healdsburg city limits to Highway 1	$27
Sonoma County	Bicycle and Pedestrian Facilities	Salmon Creek Trail	Class I bikeway along portions of North Pacific Coast Railroad right-of-way. Connects Occidental to Town of Bodega	First St. (Occidental) to Town of Bodega	$2
Sonoma County	Bicycle and Pedestrian Facilities	Santa Rosa Creek Trail Extension	Connects Prince Memorial Greenway to the Laguna de Santa Rosa Trail	Willowside Rd. to Guerneville Rd.	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	Sonoma County Bay Trail	Segments of the Bay Trail. Regional Network (23.68 miles)	Segments from Dale Ave. to Napa Co. Line, Ramal Rd. to Skaggs Island Rd., Hudeman Slough to Napa Co. Line, SMART Right-of-Way to Marin Co. Line, Sonoma Creek to State Hwy. 121, andState Hwy. 121 to Port Sonoma	$9
Sonoma County	Bicycle and Pedestrian Facilities	Sonoma County CBPMP Projects (total less than $1M each)	Total of Sonoma County bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$42
Sonoma County	Bicycle and Pedestrian Facilities	Sonoma Valley Trail (aka Central Sonoma Valley Trail)	Provides a 13.80 mile long Class I bike path alternative to Highway 12 between Santa Rosa and Sonoma. 0.42 miles have been completed. The County will complete the remaining 13.38 miles.	Along the Highway 12 corridor from Santa Rosa city limits to Sonoma city limits	$26
Sonoma County	Bicycle and Pedestrian Facilities	South Wright Rd. Class II bikelanes	Construct 2.01 mile Class II bikeway	Santa Rosa City Limits to Ludwig Ave.	$1
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 1	Construct 34.05 miles of Class II bikelanes	Kruse Ranch Rd. to Gualala River Bridge, State Hwy. 116 to Meyer's Grade Rd., Doran Beach Rd. to State Hwy. 116, andValley Ford Rd. to Slaughter House Rd.	$18

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 116 North Class II bikelanes	Construct 19.09 miles of Class II bikelanes	Moscow Rd. to State Hwy. 1, Green Valley Rd. to Armstrong Woods Rd., Gilchrist Rd. to Sebastopol City Limits, and Stony Point Rd. to Gilchrist Rd.	$14
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 116 South Class II bikelanes	Construct 2.46 mile Class II bikeway	Lakeville Hwy. to Adobe Rd.	$2
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 12 Class II bikelanes	Construct 6.93 mile Class II bikeway	Kunde Winery Rd. to Agua Caliente Rd.	$5
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 121 Class II bikelanes	Construct 7.45 mile Class II bikeway	Bisso Rd. to Napa Rd.	$6
Sonoma County	Bicycle and Pedestrian Facilities	State Hwy. 128	Construct 23.58 miles of Class II bikelanes	Chalk Hill Rd. to Napa Co. Line, Geyserville Ave. to Chalk Hill Rd., N. Cloverdale Blvd. to Mendo. Co. Line	$18
Sonoma County	Bicycle and Pedestrian Facilities	Todd Rd. Class II bikelanes	Construct 5.02 mile Class II bikeway	Santa Rosa Ave. to State Hwy. 116	$4
Sonoma County	Bicycle and Pedestrian Facilities	Trenton Rd. / Healdsburg Rd. Class II bikelanes	Construct 1.32 mile Class II bikeway	River Rd. to Eastside Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Warm Springs Rd. Class II bikelanes	Construct 5.13 miles of Class II bikelanes	Bennett Valley Rd. to Arnold Dr. and State Hwy. 12 to Bennett Valley Rd.	$4
Sonoma County	Bicycle and Pedestrian Facilities	Water Trough Rd. Class II bikelanes	Construct 1.71 mile Class II bikeway	Elphick Rd. to Bodega Hwy.	$1

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Bicycle and Pedestrian Facilities	West Sierra Ave. Class II bikelanes	Construct 1.25 mile Class II bikeway	Cotati City Limits to Stony Point Rd.	$1
Sonoma County	Bicycle and Pedestrian Facilities	Willowside Rd. Class II bikelanes	Construct 2.01 mile Class II bikeway	Hall Rd. to Piner Rd.	$2
Sonoma County	Roadway Improvements	8th Street East Corridor Improvements 1-3: Summary	Intersection improvements at Hwy 121 and 8th St East including new traffic signal, widening 8th St East between Napa Road and Napa Street, Sonoma Schellville Trail from Napa Road to Napa Street paralleling 8th St E along Railroad Right of Way (Note: this project is a combination of 3 existing projects on the list; 1. 8th Street East/Hwy 121 Signalization 2. 8th Street East widening Napa Rd to Napa St 3. Sonoma/Schellville Trail)	East of Sonoma	$-
Sonoma County	Roadway Improvements	8th Street East Corridor Improvements 2: Napa Rd. to Napa St.	8th Street East widening Napa Rd to Napa Street	Napa Rd. to Napa St.	$4
Sonoma County	Intersection Improvements	8th Street East Corridor Improvements 3: Hwy 121 @ 8th St East	Install traffic signal system on Route 121 and improve channelization at 8th Street	Hwy 121 @ 8th Street East	$4
Sonoma County	Roadway Improvements	Adobe Road Reconstruction	Reconstruct or rehabilitate sections of Adobe Road Hwy 116 to Penngrove	South Sonoma County on Adobe Rd.	$20
Sonoma County	Roadway Improvements	Adobe/Corona Intersection Improvements	Signalization & Intersection Improvements	Adobe/Corona Intersection	$2
Sonoma County	Roadway Improvements	Airport Boulevard Widening Ordiance Road and Aviation Boulevard	This is Phase 1. 2) widens Brickway to LaughlinRd; 3) widens Airport Blvd between ORH and US 101; 4) Airport Blvd I/C #22191; 5) Widens Laughlin Rd to 2 lanes, controls at River Rd.	Airport Blvd.	$50

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Roadway Improvements	Alexander Valley Road Safety and Modal Improvements	Multimodal safety improvements, such as localized widening, signage, safety beacons, and striping	Unicorportated County — North of Healdsbug	$4
Sonoma County	Intersection Improvements	Alexander Valley/ Healdsburg Ave Intersection Improvements	Intersection Improvements (Roundabout)	Alexander Valley Rd @ Healdsburg Ave	$3
Sonoma County	Intersection Improvements	Arnold/ Madrone Intersection Improvements	Signalization & Intersection Improvements	Arnold @ Madrone	$2
Sonoma County	Roadway Improvements	Bodega Highway improve-ments west of Sebastopol	Straightens curves near Occidental and add turn pockets where needed.		$20
Sonoma County	Roadway Improvements	Brickway/ Laughlin Corridor Improvements	Access connection to the Airport Blvd. corridor with a new bridge	River Rd to Airport Blvd.	$8
Sonoma County	Roadway Improvements	Hwy 116 Intersection Improvements (County portion)	Signalization & Intersection Safety Improvements	Multiple locations in the Hwy 116 Corridor	$10
Sonoma County	Roadway Improvements	Llano Road improvements & extension	Llano Road improvements, Hwy 116 to Occidental Road		$10
Sonoma County	Multimodal Streetscape Improvements	Mark West Springs Road/ Porter Creek Road safety improvements	Multimodal safety improvements, such as localized widening, signage, safety beacons, and striping.	Various locations on Markwest Springs Road and Porter Creek Rd.	$5

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Intersection Improvements	Mirabel Road Corridor Improvements 1-4: Summary	Intersection improvements at Hwy 116, intersection improvements at River Road, shoulder widening on Mirabel Road between Hwy 116 and River Road for Class II bike lanes and West County Trail Extension connecting downtown Forestville to Forestville Youth Park, (Note: this project is a combination of 4 existing projects on the list; 1.Mirabel Road and Route 116 signalization and channelization 2.River/Mirabel intersection improvements 3.Mirabel Road improvements 4. West County Trail Extension)	Forestville	$-
Sonoma County	Intersection Improvements	Mirabel Road Corridor Improvements 3: River Rd @ Mirabel	Signalization or Roundabout & intersection improvements	River Rd @ Mirabel	$4
Sonoma County	Intersection Improvements	Mirabel Road Corridor Improvements 4: Hwy 116 at Mirabel Rd	Construct roundabout at current intersec-tion controlled by single stop sign.	Hwy 116 at Mirabel Rd	$24
Sonoma County	Intersection Improvements	Old Redwood Hwy/Fulton Intersection Improvements	Signalization & Intersection Improvements	Old Redwood Hwy/Fulton	$2
Sonoma County	Intersection Improvements	Porter Creek Rd/Calistoga Rd/Petriforest Rd. Intersection Improve	Intersection Improvements	Porter Creek Rd/ Calistoga Rd/ Petriforest Rd.	$3
Sonoma County	Intersection Improvements	Railroad Ave Improvements	Signalization and intersection improvements	at Old Redwood Hwy & at Petaluma Hill Road	$4
Sonoma County	Roadway Improvements	Realign Route 116 (Stage Gulch Road) along Champlin Creek and wid			$38

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County	Roadway Improvements	River Road channel-ization and improvements	Widen River Road and construct left turn pockets at Argonne Way and at Trenton Road/Steelhead Beach park	Unicorporated County	$10
Sonoma County	Roadway Improvements	River Road Widening — Fulton to Old Redwood Hwy	River Rd/Mark West Springs – construct 2 additional lanes from Fulton to Old Redwood Hwy.	River Rd. — Fulton to Mark West Springs Rd	$7
Sonoma County	Roadway Improvements	Sonoma County Bridge Widening Program	Widen existing one lane bridges throughout Unicorporated Sonoma County to two lanes	Various	$19
Sonoma County	Intersection Improvements	Stony Point Rd Intersection Improvements	Signalization & intersection improvements at Roblar Road	Stony Point Rd @ Roblar Rd	$3
Sonoma County	Roadway Improvements	Todd Road Reconstruction	Widen Todd Road to include General Plan requirements — reconstruct from Stony Point Road to Llano Road extend east to Petaluma Hill Road	Unicorporated County	$30
Sonoma County	Multimodal Streetscape Improvements	Verano Ave — center turn lane from Arnold to HWY 12	Corridor improvements — pedestrian, bike, transit	Hwy 12 to Riverside Dr.	$3
Sonoma County	Roadway Improvements	Pavement Maintenance Countywide	Maintenance of pavement — slurry, crack seal — surface treatment	various roads countywide	$1,200
Sonoma County Transit	Transit Improvements — Non Capital	SCT Bus yard, maintenance facility, bus stops, park and ride lots (existing)	Estimated costs to maintain SCT's existing facilities (operations & maintenance facility, bus stops, park-and-ride lots, inter-modal facilities etc) during the 25-year life of the CTP	Sonoma County	$10
Sonoma County Transit	Transit Capital Projects	SCT Countywide Bus Stop Improvements	Expanded NextBus real-time information panels at bus stops and shelters, addi-tional and replacement passenger shelters and benches.	Sonoma County	$3
Sonoma County Transit	Transit Improvements — Non Capital	SCT Existing Operations (Current)	Estimated cost to maintain SCT's current levels of service for fixed- route and para-transit during the 25-year life of the CTP.	Sonoma County	$490

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County Transit	Transit Capital Projects	SCT Existing Vehicle Replacements (transitioning toward zero emissions fleet by 2029)	Estimated costs to replace SCT's existing fixed route and paratransit vehicles during the 25-year life of the CTP.	Sonoma County	$54
Sonoma County Transit	Transit Improvements — Non Capital	SCT Expanded Core Intercity Routes	Expanded weekday and weekend service (including paratransit) on "core" intercity routes 20, 30, 44, 48 and 60.	Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Rohnert Park, Cotati, Guerneville/ Monte Rio area, Sonoma/Sonoma Valley area, Petaluma.	$39
Sonoma County Transit	Transit Improvements — Non Capital	SCT Expanded Local Transit Services	Expanded weekday and/or weekend transit services (including paratransit) on routes 10, 12, 28, 32 and 68.	Cloverdale, Guerneville/ Monte Rio area, Rohnert Park, Cotati, Sonoma/ Sonoma Valley area.	$25
Sonoma County Transit	Transit Capital Projects	SCT Facility Expansion, bus yard and maintenance	SCT bus yard and operations/maintenance facility expansion needed to accommo-date proposed reduced headways and expanded weekend service on SCT's local and intercity bus routes. (Unconstrained Project)	Sonoma County	$10
Sonoma County Transit	Transit Capital Projects	SCT Fleet Replacement & Electric Charging Infrastructure (transitioning toward zero emissions fleet by 2029)	Scheduled bus replacements (CNG & Electric) and expanded electric charging capabilities at SCT's transit facility in Santa Rosa and on-route in various cities throughout Sonoma County.	Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Rohnert park, Petaluma, Sonoma	$41

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Sonoma County Transit	Transit Improvements — Non Capital	SCT Local Route Fare-Free Program	Free fares on all SCT local routes and local paratransit trips (replaces respective local city-based funding for fare-free routes).	Cloverdale, Healdsburg, Windsor, Sebastopol, Rohnert Park, Cotati, Sonoma/ Sonoma Valley area, Guerneville/ Monte Rio area.	$13
Sonoma County Transit	Transit Improvements — Non Capital	SCT Systemwide service expansion on core intercity and local routes (phase 2)	Increase service on various routes system-wide (Unconstrained Project)	Sonoma County	$31
Sonoma County Transit	Transit Capital Projects	SCT Vehicle Expansion (transitioning toward zero emissions fleet by 2029)	Estimated 25 additional transit vehicles needed to accommodate proposed reduced headways and expanded weekend service on SCT's local and intercity bus routes. (Unconstrained Project)	Sonoma County	$15
Windsor	Bicycle and Pedestrian Facilities	Conde Lane: Oakfield Lane to Mitchell Lane	Improve Conde Lane from Oakfield Lane to Mitchell Lane to provide bike lanes and sidewalk on the west side. It is currently estimated that 50 percent of this project will be completed as part of adjacent private developments.	Conde Lane: Oakfield Lane to Mitchell Lane	$8
Windsor	Bicycle and Pedestrian Facilities	Downtown Ped & Bike Crossing of US 101 Phase 1 — Underpass Widen	Improving existing US 101 underpass by widening the space under US 101 using new tie-back walls and adding Class I paths with protected two-way bike lanes and widened pedestrian paths. Improvements also include new lighting, landscaping, color and artwork.	Old Redwood Highway from US 101 NB on-ramp to Conde Lane	$7
Windsor	Bicycle and Pedestrian Facilities	Downtown Ped & Bike Crossing of US 101 Phase 2 — Overcrossing	Improving east and west connectivity of central Windsor with a new bicycle and pedestrian bridge over crossing US 101 with touchdown areas at each end of the bridge.	Los Amigos Road to Old Redwood Highway over US 101	$17

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Windsor	Bicycle and Pedestrian Facilities	Jensen Lane East Connector	Install a Class I multi-use trail for pedestrians and bicyclist to connect southeast Windsor to northeast Windsor near Foothill Regional Park.	Old Redwood Hwy to Vinecrest Road adjacent to Emmerson Street and Jensen Lane	$1
Windsor	Bicycle and Pedestrian Facilities	Old Redwood Highway Greenway: Hembree Lane to Shiloh Road	Widen Old Redwood Highway, add bicycle lanes and sidewalks where missing and replace two drainage structures. Improve the street to current design standards, including completion of sidewalks. Install Class I Multi-Use Path (Old Redwood Greenway) between Pleasant Avenue and Shiloh Road.	Old Redwood Highway from Hembree Lane to Shiloh Road	$13
Windsor	Bicycle and Pedestrian Facilities	Starr Road: Re-Build Railroad Grade Crossing	Widen the street and install sidewalks and bicycle lanes on Starr Road within the limits of the railway right of way.	Starr Road at SMART Train Station	$1
Windsor	Bicycle and Pedestrian Facilities	Windsor CBPMP Projects (total less than $1M each)	Total of Windsor bike/ped projects from Countywide Bicycle and Pedestrian Master Plan that are each less than $1M		$8
Windsor	Highway Improvements	Arata Lane Interchange Phase 2B NB On-ramp (CIP FY 2016-2017)	Construction of the Northbound on-ramp to US 101 will compelte the Arata Lane interchange with US 101. This proejct also includes the relocation of a portion of Los Amigos Road north of Arata Lane. Rights of way have been obtained in prior phases.	Arata Lane interchange Northbound on-ramp	$4
Windsor	Intersection Improvements	Intersection Modification at Lakewood Drive/Old Redwood Highway	Widen Old Redwood Hwy and Lakewood Drive to provide additional right turn lanes and provide a signal at the northbound on-ramp.	Lakewood Drive at Old Redwood Hwy	$2

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Windsor	Roadway Improvements	Jaguar Way Extension (CIP 2015-2016)	Provide a street link between Windsor Road and Starr Road, including access to Windsor High School. The project consists of one-half mile of new roadway improvements, including one travel lane in each direction, bike lanes, street lighting, sidewalks, and a bridge crossing at Starr Creek.	Directly north of Windsor High School and other parcels, from Windsor Road to Starr Road	$9
Windsor	Roadway Improvements	Old Redwood Highway: Widen from Arata Lane to North Town Limits	Widen Old Redwood Highway between Arata Lane and the Northerly Town Limits. It is estimated that 50 percent of this project will be completed with private development.	Old Redwood Highway from Arata Lane to Northerly Town Limits	$5
Windsor	Roadway Improvements	Old Redwood Highway: Windsor Road to Arata Lane	Widen Old Redwood Highway between Windsor Road and Arata Lane to include a center lane. It is estimated that 50 percent of this project will be completed with private development.	Old Redwood Highway from Windsor Road to Arata Lane	$13
Windsor	Highway Improvements	Shiloh Road Interchange Reconstruction	Reconstruct the Shiloh Road/US 101 interchange to provide two lanes in each direction. It is anticipated that the existing overcrossing will be replaced and ramps reconfigured. It is expected that 60 percent of project costs will come from federal, state, or regional funds.	Shiloh Road/US 101 interchange	$45
Windsor	Roadway Improvements	Shiloh Road: Hembree Lane to Old Redwood Highway	Widen Shiloh Rd from Hembree Ln to Old Redwood Hwy and bring it up to current design standards. It is currently estimated that 75 percent of the planned improvements will be completed as part of private developments within the Shiloh Vision Plan Area.	Shiloh Road from Hembree Lane to Old Redwood Highway	$11
Windsor	Highway Improvements	US 101 Overcrossing of Arata Lane	Replace the US 101 overcrossing of Arata Lane to provide lane capacity and enhanced bicycle and pedestrian facilities, including sidewalks. It is expected that 60 percent of project costs will come from federal, state, or regional funds.	US 101 Overcrossing of Arata Lane	$18

Sponsor	Project Type	Project Name	Description	Location	Cost ($M)
Windsor	Intersection Improvements	Windsor River Rd/ Windsor Rd Int Improvements (CIP FY 2015-16)	Design/environmental/construction work for intersection improvements. Improvements include a complete recon-figuration of the signalized intersection to a roundabout.	Windsor River Road/Windsor Road/Northwest Pacific Railroad Intersection	$10
Windsor	Roadway Improvements	Pavement Maintenance Program – Road Rehabilitation	Resurface streets and roads in Windsor, includes the installation of ADA pedestrian ramps where non-ADA compliant ramps exist within the project limits.	various streets and roads in Windsor	$72

TABLE A-3.2 TRANSPORTATION NEEDS FROM CBO OUTREACH

#	Transportation Needs	CTP project match
1	Fix or install traffic lights where they are needed (e.g. on College Avenue, where there are a lot of crosswalks for pedestrians, but no actual warning lights for them to cross).	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
2	Maintain sidewalks in the areas of Corby and Barham Avenue.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
3	Make room for both a car and a bicyclist to fit in several areas: by West Side in Healdsburg, River Road and along Guerneville Road. We also need more bike signs where curves push motorists into oncoming traffic when they try to avoid bicyclists.	Mirabel Road Corridor Improvements 1-4: Summary (4563)
4	Improve maintenance of roads in Roseland (South West Santa Rosa), especially on Corby Ave and Barham Avenue in the Moorland Neighborhood.	Maintain Transportation System Pavement — Maintenance (2000); Maintain Transportation System — Road Rehabilitation (4030)
5	Add a stretch of lane for cars to merge on the 101 Freeway exit Todd Road heading south. Makes it so that ongoing traffic heading south doesn't have to stop abruptly.	
6	Address lane changing confusion on Hwy 101 Santa Rosa exit heading North at the intersection with Hwy 12. The Santa Rosa Exit is very complicated when having to change lanes just to take the exit or to merge on Hwy 101 North.	
7	Address safety issues with exit ramp heading to Sonoma Ave and Hwy 12 from Hwy 101 North. The corner house has had numerous cars crash into the yard. Add a barrier between the house and that exit ramp.	
8	Address traffic caused by trucks between Sonoma and Santa Rosa because there is only one road (Hwy 12).	SCT Expanded Core Intercity Routes (TR0008)
9	Promote carpooling as cost-efficient and a way to lower the cost of driving.	Countywide Microtransit (TR0012)
10	Increase frequency of buses at Moorland as wait between times is long and inconvenient.	Enhanced Core Network and Rapid Bus (4540)
11	Match weekend bus service to weekday service.	Enhanced Core Network and Rapid Bus (4540)
12	Provide more bus route options in the service area and increase frequency.	Enhanced Core Network and Rapid Bus (4540); SCT Expanded Core Intercity Routes (TR0008); SCT Expanded Local Transit Services (TR0007)
13	Redesign signage inside buses to have bigger text and fully bilingual instructions (Spanish-English).	

#	Transportation Needs	CTP project match
14	Hire more Spanish-speaking bus drivers. All bus drivers should be bilingual, along with the receptionist at the bus station terminal.	
15	Promote more people biking and walking.	
16	Increase requirements for people to get their driver's license in order to reduce risky drivers.	
17	Consider hiring crossing guards for more locations than just by schools.	
18	Install merge lanes to turn left on Highway 116 in Petaluma in order to better access homes in the area.	
19	Add more bicycle paths in Roseland.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
20	Add and widen bike lanes.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4524); Petaluma CBPMP Projects (BP983); Class 2 bicycle lane segments citywide (BP77)
21	Improve sidewalks so people will walk more.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4524); Petaluma CBPMP Projects (BP983); Class 2 bicycle lane segments citywide (BP77)
22	Close sidewalk gaps along Lakeville Hwy-Hwy 116 so people can walk to Kaiser Permanente.	
23	Make it easier to rent a scooter or bike in order to encourage not using a car.	Countywide Expansion of Micromobility and first/last mile (4538)
24	Create a new "Walk and roll to school" campaign to encourage students to walk or ride to school, where students would get a raffle ticket for a bike every time they walked or rode to school.	Safe Routes to School (4505)
25	Add newer and more eco-friendly buses.	Transitioning toward zero emissions fleet by 2029: Petaluma Fleet Replacement (4505); Santa Rosa Bus Replacements (4510); SCT Existing Vehicle Replacements (4504); Santa Rosa Transit Fleet Electrification (TR0002)
26	Add more safety measures for smart train stops or where the bus passes by (especially in Rohnert Park).	
27	Install lighting at more bus stops — especially important when daylight savings time ends	SCT Countywide Bus Stop Improvements (TR0009); Ongoing Bus Stop Improvements (4539)

#	Transportation Needs	CTP project match
28	Provide transit discounts for multiple family members, or reduced prices, so that big families can afford to take transit.	SCT Local Route Fare-Free Program (TR0010); Systemwide Fare-free Transit and Paratransit (TR0001); Fare Free Program (TR0006)
29	Offer free rides on buses to all elderly people and potentially everyone else.	SCT Local Route Fare-Free Program (TR0010); Systemwide Fare-free Transit and Paratransit (TR0001); Fare Free Program (TR0006)
30	Increase carpooling.	Countywide Microtransit (TR0012)
31	Make it easier for riders taking routes that are located at Coddingtown to get downtown.	Enhanced Core Network and Rapid Bus (4540)
32	Provide digital display of bus routes with accurate timing and route signage at each stop.	Passenger Information and Fare Payment Technology and Marketing (3041)
33	Provide a smartphone app that shows the closest bus stop and estimated arrival time for buses.	
34	Work with Google to have Google Maps show bus routes.	
35	Address unsafe parked cars and lack of parking signs on Sebastopol Road near the Roseland Village Shopping Center.	
36	Schedule garbage trucks and street cleaning outside of regular commute times.	
37	Do more to reduce congestion on Sebastopol Road.	Sebastopol Road Corridor Plan widen Dutton Ave to Stony Point Rd (2119); Sebastopol Road Corridor Plan widen Olive Street to Dutton Avenue (2078); West Avenue reconstruct and widen Sebastopol Road to South Avenue (2051); Enhanced Core Network Part 3 of 3 (capital)—Rapid Bus planning, engineering , and infrastructure (3007)
38	Do more to coordinate and design systems of bicycle lanes.	Climate Adaptation Technology Innovation Transport Initiatives (4526)
39	Implement more walking trails to school, such as through Safe Routes to School.	Safe Routes to School (4505)
40	Ensure all roads are regularly swept in Roseland.	
41	Make paratransit service curb to curb instead of door to door.	
42	Work with healthcare providers, like Kaiser, to partner with Uber and Lyft to book a driver when you book your appointment. This saves money when fewer people miss their appointment.	

#	Transportation Needs	CTP project match
43	Run bus routes with 15 minutes between buses (45 minutes to 1 hour doesn't work).	Enhanced Core Network and Rapid Bus (4540); SCT Expanded Core Intercity Routes (TR0008); SCT Expanded Local Transit Services (TR0007)
44	Increase frequency of bus schedule to accommodate seniors. Could be even be with smaller buses.	Enhanced Core Network and Rapid Bus (4540); SCT Expanded Core Intercity Routes (TR0008); SCT Expanded Local Transit Services (TR0007)
45	Provide a SMART Train ticket kiosk or a person assisting at train stops for seniors or people who are not tech savvy	
46	Provide a phone number where people can call to get help to get around on the buses or train (for people who don't know how to use the bus system).	
47	Offer an app to report street maintenance ("My Santa Rosa" app was useful and easy to use, but now it's gone and reporting issues is more time consuming).	
48	Offer something like a fast track, maybe a clipper card, for people who use multiple transportations. This would help with using less paper and hopefully a discounted cost.	
49	Making better use of the HOV lane.	
50	Provide more bike racks, including working with businesses at their locations.	
51	Provide separate parking area for bicyclists, away from the cars.	
52	Provide bike paths on more roads and make them closer to the sidewalks.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4524); Petaluma CBPMP Projects (BP983); Class 2 bicycle lane segments citywide (BP77)
53	Run a shuttle between SSU and the train station to provide students with more affordable options.	Countywide Expansion of Micromobility and first/last mile (4538); First/Last Mile SMART Stations Capital Enhancments (4503)
54	Work with healthcare providers, like Kaiser, to provide a shuttle from transit in order to reduce costs when people fall, get sick, etc.	Countywide Microtransit (TR0012)
55	Provide more seating at bus stops.	SCT Countywide Bus Stop Improvements (TR0009); Ongoing Bus Stop Improvements (4539)
56	Outfit all buses with bike racks.	
57	Allow college students to use the bus for free in order to help them save money and encourage them to use public transportation more often.	SCT Local Route Fare-Free Program (TR0010); Systemwide Fare-free Transit and Paratransit (TR0001); Fare Free Program (TR0006)

#	Transportation Needs	CTP project match
58	Provide some kind of discount for city and county bus transfers.	
59	Make the SMART train more affordable for people by working with employers to pay or help their employees with some discount. If employer doesn't want to help the employee then people who use multiple transportations should get a tax reduction to use towards their taxes.	
60	Provide incentives for using transit.	SCT Local Route Fare-Free Program (TR0010); Systemwide Fare-free Transit and Paratransit (TR0001); Fare Free Program (TR0006)
61	Work with the Area Agency on Aging and Kaiser to share costs around transportation with the hope that other hospitals will follow suit.	
62	Provide transportation reimbursement for people who have medical issues.	
63	Put more regulations should in place for bicyclists, as there have been many accidents with bicyclists where it does not feel safe for either the drivers or the person on the bike.	
64	Restrict freight trucks to the lane closest to the interstate exits as to be safer for other drivers. Freight trucks carry heavy loads and often cannot drive over a certain speed limit.	
65	Increase enforcement of traffic safety laws for drivers of freight trucks.	
66	Label red no parking lanes at the ends of streets as many cars park at the end of the streets and end up causing blind spots that make it difficult to enter into an intersection.	
67	Redesign bus maps and route names to make them less confusing. For example, there are now many numbers and letters for each of the stops, which are not easy to follow. Keep it simple, like buses 1-14 (example) or look at other really good transportation systems, like the ones in Washington or Chicago.	
68	Increase traffic checks to make sure drivers are using blinkers and freight trucks not using the middle lane.	
69	Require motorcycles to only drive in the fast lane.	
70	Improve many streets that have potholes and need more maintenance. For example, streets that surround Piner High School, Todd Road and roads surrounding Comstock Middle School.	Maintain Transportation System Pavement — Maintenance (2000); Maintain Transportation System — Road Rehabilitation (4030)

#	Transportation Needs	CTP project match
71	Add sidewalks to streets in the Rincon Valley area. For example, near the middle school (Rincon Valley Middle School) and the High School (Mario Carrillo High School).	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
72	Add sidewalks to streets in the Moorland Neighborhood.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
73	Add more walking bridges over Hwy 101 to help with getting between neighborhoods.	Highway 101 Bicycle/Pedestrian Crossing (3048); New Bike/Pedestrian Path Crossing Hwy 101 at Hinebaugh Creek (BP171); East West Bicycle and Pedestrian Connections (4529)
74	Address traffic safety in the Piner neighborhood. For example, add crosswalks in the area surrounding the schools. Many students walk to school and sometimes use a back entrance but it is also unsafe and there needs to be more flashing lights for pedestrians.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4534)
75	Construct sidewalks around more bus stops as there are often not even sidewalks at bus stops on the side of a road. For example, the bus stop on Hwy 12 heading to Sebastopol.	SCT Countywide Bus Stop Improvements (TR0009)
76	Adopt concrete dividers for bike lanes where feasible.	
77	Add more bike lanes near the schools as many students also ride their bikes to school.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4524); Petaluma CBPMP Projects (BP983); Class 2 bicycle lane segments citywide (BP77)
78	Add bike lanes to every street and use colors for the lanes when possible.	
79	Dedicate more funds in unincorporated Sonoma County to rebuild roads or do maintenance. For example, at Chico Ave there have been numerous requests to help rebuild the road, but there has been no responses and no work done to date.	Pavement Maintenance Countywide (4508)
80	Improve transition from Hwy 101 and Hwy 12 going north around the Santa Rosa downtown exit.	
81	Add more light posts on Petaluma Hill Road.	
82	Add places for people to sit at each of the bus stops with some sort of shade being provided.	SCT Countywide Bus Stop Improvements (TR0009); Ongoing Bus Stop Improvements (4539)
83	Separate bus stops from ongoing traffic where possible.	Enhanced Core Network Part 3 of 3 (capital) — Rapid Bus planning, engineering , and infra-structure (3007); Enhanced Core Network and Rapid Bus, operating (4540)

#	Transportation Needs	CTP project match
84	Offer more cost saving options for all students to be able to afford the bus. For example, the discount for students who attend SRJC and have free bus rides.	SCT Local Route Fare-Free Program (TR0010); Systemwide Fare-free Transit and Paratransit (TR0001); Fare Free Program (TR0006)
85	Provide more frequent buses from Santa Rosa to Graton Day Labor Center in order to entice people to use them.	SCT Expanded Core Intercity Routes (TR0008)
86	Provide better outreach about public transit in others language and though multiple channels. Examples include mailing information in Spanish to people's homes, sharing information on Spanish-speaking TV channels (such as Univision), and translating all information in Spanish so people can trust to expect information in Spanish.	
87	Identify significant languages spoken by immigrant communities other than Spanish.	
88	Hire more bus drivers who can speak Spanish. A Spanish speaker who is familiar with the bus and other public transit systems could be a translator in person as accompaniment, or over phone as a temporary solution until there are bilingual bus drivers.	
89	Provide a public transit hotline number with translators, including indigenous language translators.	
90	Provide video or audio information about the public transit system as not everyone can read text.	
91	All buses should give change automatically. Every dollar counts for low-income riders and it feels unjust when users cannot get change back.	
92	Provide more sidewalks in some neighborhoods.	Citywide Bicycle and Pedestrian Projects 1st Phase — Plan Update (4524); Petaluma CBPMP Projects (BP983)
93	Fix potholes in low-income neighborhoods.	Pavement Maintenance Countywide (4508)
94	Provide more shading in the transit system as it is a concern to participants health and well-being (especially for elderly and mothers with small children).	Ongoing Bus Stop Improvements (4539)
95	Utilize new resources, like Uber/Lyft for more individualized rides for seniors.	
96	Organize more volunteer drivers to help seniors get around. For example, 1 Ride by Petaluma People Services offers 3 rides 3 x a week for seniors.	
97	Add another bus route to get to the coast during the summer. For example, a coastal bus from Petaluma, Cotati and Rohnert Park.	SCT Expanded Core Intercity Routes (TR0008)

#	Transportation Needs	CTP project match
98	Add a small bus from Guerneville to Armstrong Wood that runs every hour.	Countywide Microtransit (TR0012)

A-4.1 Performance Results

Metric	Description	2015 Existing	2050	Trend
System Condition and Safety				
PCI	Pavement Condition and unmet maintenance needs	53 (at-risk)	Dependant on level of investment.	Sonoma County jurisidictions have unfunded need for road repair and rehabilitation to bring them up to a state of good repair (PCI in good or better category). The needs exceed projected funding by $2.2 Billion.
Transit Connectivity	Transit Vehicle Revenue Hours (Avg. Weekday) — Change in bus transit service hours in Sonoma County.	760	1365	Sonoma County estimated transit vehicle revenue hours (a representation of transit service availability) for an average weekday is expected to increase by roughly 80% if all "vision" or unfunded transit improvements are implemented by 2050.
Collision Rates	Average Daily Crashes in Sonoma County	6.4	7.6	Injury and fatality collisions in Sonoma County are predicted to increase by just over 1 per day if current collision rates continue as the county population grows. Current Vision Zero efforts are seeking to reduce and eventually elimate fatal crashes entirely in the future.
Travel Efficiency				
Person Hours of Delay	Daily hours lost due to congestion	23,495	34,363	Congestion is predicted to increase by roughly 1/3 in the future which is roughly in line with combined rates of population and employ-ment growth.
Monthly Person Hours of Delay/ Capita	Hours lost due to conges-tion per person each month	1.4	1.7	Each person looses about 1.4 hours due to traffic congestion each month. This is predicted to increase slightly in the future.
Average Travel Time — Minutes	All trips	14.34	14.01	Travel times are predicted to drop slightly due to more efficient development patterns contained in general plans. Work trips are generally longer than other trips and this is expected to continue in the future.
	Work Trips	22.13	21.27	
Average Trip Length — Miles	All trips	8.12	7.84	Trip lengths, or trip distances are predicted to drop slightly in the future due to more efficient development patterns contained in general plans. Workers typically travel futher to work than other destinations and this is expected to continue in the future.
	Work Trips	13.83	13.28	

Metric	Description	2015 Existing	2050	Trend
Transit Use and Active Transportation				
Mode Share (Non-motorized)	% of trips by non-auto modes that begin and/or end in Sonoma County.	8.50%	8.50%	The share of people using transit and active transportation modes (biking, walking) is projected to stay the same. The number of travellers walking, biking, and taking transit, but so does the number of travellers driving or sharing an automobile trip.
Non-motorized Network Connectivity	Change in the number of bicycle facility miles in Sonoma County	208.23	1,066.47	The mileage of bicycle and pedestrian facilities includinig off street multi-use pathways, on street bike lanes, and marked bike routes would increase by over 5 times if the entire CTP and Countywide Bicycle and Pedestrian Plan list of unfunded non-motorized projects were funded.
Transit Ridership	Daily public transit ridership (all transit) that begins and/or ends in Sonoma County.	16,170	20,883	Transit ridership is projected to increase in the future. It is anticipated that this is due to population growth and improvements to transit service.
Transit Ridership/Capita	Annual public transit ridership (all transit) that begins and/or ends in Sonoma County per person. Efficiency metric controls for population growth.	11.75	12.25	Transit ridership per capita is projected to increase slightly due to transit system improvements.
Equity and the Environment				
Average Household Travel Costs	Average percentage of household income spent on transportation	22.1%	21.6%	The average percentage of household income spent on transportation is predicted to drop slightly because of more efficient growth patterns in general plans, and more non-auto travel options included in the complete CTP project list.
GHG Emissions	GHG emissions (CO2E) for autos and light duty trucks for travel beginning and/or ending in Sonoma County.	2,645,752	1,752,714	GHG emissions are projected to decrease. This is primarily do to improved vehicle fuel economy as projected by the State of California (EMFAC 2017)

Metric	Description	2015 Existing	2050	Trend
GHG/capita	GHG emissions per person, controls for population growth.	5.27	2.85	GHG emissions per capita are projected to decrease due to improved vehicle fuel economy standards mandated by the state and more concentrated and efficient predicted future development patterns.
Vehicle Miles Traveled (VMT)	Vehicle miles of travel for all auto/light duty truck travel for travel that begins and/or ends in Sonoma County	14,407,222	17,192,167	Total VMT is projected to increase but at a slower rate than population and employment growth.
VMT/capita	VMT per capita, controls for population growth.	28.69	27.65	VMT per capita is projected to decrease
VMT/job	VMT per job, controls for employment growth.	66.55	55.16	VMT per job is projected to decrease

A-4.2 Transportation Electrification

Transportation Electrification

Electric vehicles powered with clean renewable energy represent a huge opportunity to reduce greenhouse gas emissions from transportation while keeping money spent on fuel in the local economy, reducing pollution, and saving drivers money.

EV technologies are commercially viable and the infrastructure needed to use electricity as transportation fuel is mostly in place in the form of the existing electricity grid. This is in contrast with using hydrogen, which holds great promise as a transportation fuel but requires entirely new distribution infrastructure. EVs are more efficient than gas vehicles with over 77% of the energy from the local grid converted to power on the road. For comparison, typical gasoline vehicles can only convert around 12% of the energy and produce significant excess heat.[1]

- The default power for residents and businesses in Sonoma County is 97% carbon free, making it one of the best places in the U.S. to reduce emissions through electrifying transportation.[2] With expectations for continued growth in EVs, electric vehicles are projected to use 5.4% of California's electricity by 2030.[3] Continued growth in clean energy and more resilient power grids will be key to fueling the shift to electric transportation.

Electric Vehicles

EV sales have continued to grow in Sonoma County since they were introduced in 2010. There have been 10,827 cumulative light-duty ZEV sales in Sonoma County between 2010 and 2020, with 1,609 just in 2020. Statewide, ZEV sales made up 7.78% of new light duty vehicle sales in 2020 and ZEVs now make up 2.3% of all registered light-duty vehicles in Sonoma County.

Private EV ownership cannot meet all transportation needs. Public bus transit is also electrifying and bringing cleaner air with quiet operation to many neighborhoods. As of 2020 there are three electric buses in the Sonoma County fleet and all transit agencies in Sonoma County are actively working to procure electric buses ahead of the state requirements. In 2018, the California Air Resources Board set requirements that all transit bus fleets transition to 100% zero emission vehicles by 2040, with all bus purchases starting in 2029 required to be battery electric or fuel cell electric.[4]

Charging Infrastructure

While most EVs charge overnight at home, public charging opportunities are also an important part of supporting adoption of EVs. In 2020, Sonoma County had 94 DC Fast Chargers (91 public and 3 shared private), along with 634 of the slower Level 2 chargers (404 public and 231 shared private).

1 U.S. Department of Energy, www.fueleconomy.gov/feg/evtech.shtml
2 SCP Power Sources, https://sonomacleanpower.org/power-sources
3 The Pew Charitable Trusts, www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/01/09/electric-cars-will-challenge-state-power-grids?
4 California Air Resources Board, https://ww2.arb.ca.gov/news/california-transitioning-all-electric-public-bus-fleet-2040

Sonoma County has more public level 2 and DC fast chargers per capita compared to the state average, but overall has 15% fewer chargers per capita when compared to the state average. This is due to a lower density of shared private chargers that are typically found at workplaces and multi-unit dwellings.

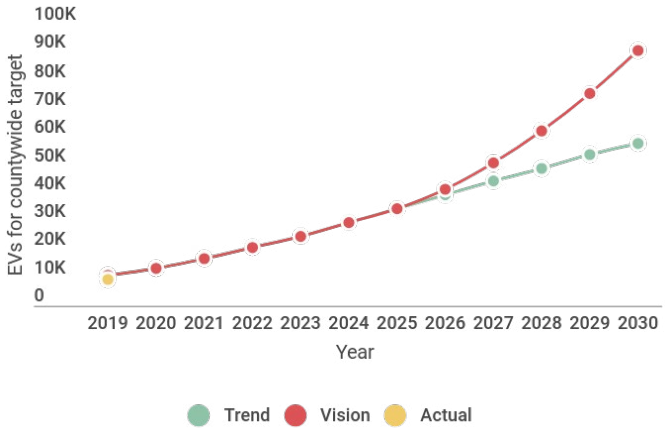
The Evolution of EVs

The Bloomberg New Energy Forecast (BNEF) publishes an annual electric vehicle outlook.[5] In 2020, they forecast that car makers are moving up their plans to launch new EVs launch – partly to comply with tougher regulations in China and Europe. BNEF forecasts that by 2022 there will be more than 500 different EV models sold across the world and that increased model choice and more aggressive pricing will bring new customers into the EV market.

According to the forecast, "the electric share of total vehicle sales is still small, but it is rising fast. By 2040, over half of all passenger vehicles sold will be electric."[6] California sales are likely to follow a steeper curve in keeping with Governor Newsom's Executive Order N-79-20 requiring 100 percent of all new in-state sales of cars and light trucks to be zero-emissions vehicles by 2035.[7]

In 2017, the SCTA and RCPA developed a countywide EV Charging Infrastructure Siting Framework in order to inform EV charging infrastructure investment for local governments, EV service providers, utilities, employers and developers. The recommended level of public and workplace charging from the framework reflect a goal of 100,000 electric vehicles operating in Sonoma County by 2030. The Shift Sonoma County plan estimates that this would cut Sonoma Country transportation emissions in half.

FIGURE X. EV SALES TO MEET SHIFT SONOMA COUNTY GOAL OF 100,000 BY 2030



The Shift Sonoma County plan set a goal for a 50% reduction in transportation emissions by 2030 that could be achieved through vehicle electrification. The plan includes a scenario built with a model from the Electric Power Research Institute that shows there would need to be over 7,000 workplace chargers and over 4,000 opportunity chargers to meet the 2030 goal.

The Shift Sonoma County also includes a charging infrastructure siting tool that shows the potential for near term EV charging station locations in Sonoma County based on a set of criteria such as levels of forecasted EV ownership and the SCTA's Sonoma County Travel Model. This gives a picture of where likely EV owners will travel to and highlights the most likely

5 BNEF EV Outlook, https://about.bnef.com/electric-vehicle-outlook/
6 BNEF EV Outlook, https://about.bnef.com/electric-vehicle-outlook/
7 Governor Newsom's Zero-Emission by 2035 Executive Order, https://ww2.arb.ca.gov/resources/fact-sheets/governor-newsoms-zero-emission-2035-executive-order-n-79-20

opportunity charging needs. The map and forecasted charging infrastructure needs show that there is significant progress needed to build out new EV charging locations.

FIGURE X: HEAT MAP OF FORECASTED EV OPPORTUNITY CHARGING DEMAND

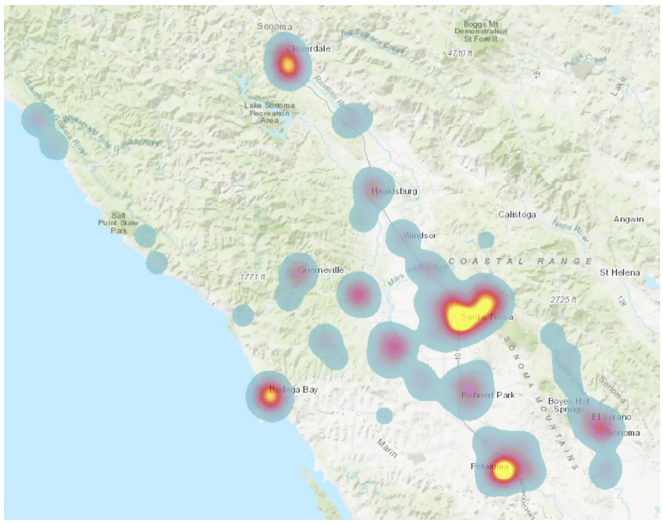


TABLE X: PUBLIC OPPORTUNITY CHARGING PORTS TO SUPPORT 2030 EV GOAL

Jurisdiction	2019 actual	2030 target
Cloverdale	7	179
Cotati	6	45
Healdsburg	67	108
Petaluma	104	718
Rohnert Park	28	481
Santa Rosa	224	1866
Sebastopol	19	247
Sonoma	33	83
Windsor	23	23
Unincorporated	49	562

A complete list of recommended strategies and actions to achieve a zero-emissions transportation network is included in Appendix X.

A-4.3
GHG Reducing Strategies Matrix

Strategies and Actions	Implementing Party	Implementation Needs	Implementation Time Frame
Bicycle and Pedestrian Improvements			
Improve bicycle network with low-stress facilities, prioritizing closing gaps in network	Local Jurisdictions, SCTA	Funding, Bike Plan Updates	Medium
Improve bicycle parking at transit hubs	Transit Providers, Local Jurisdictions, SCTA	Integration Plan, Funding	Short
Improve bicycle connections to transit hubs	Local Jurisdictions, Transit Providers, SCTA	Integration Plan, Funding	Medium
Improve maintenance on bikeways, including path maintenance and debris clearing on on- and off-road facilities	Local jurisdictions	Funding	Short
Require bicycle lockers/racks at park & ride lots	Caltrans, Transit Providers	Funding	Short
Require large commercial developments to install showers and lockers for employees commuting by bicycle	Local Jurisdictions	Local Ordinances and Support, Funding	Short
Require commercial developments to install sufficient bicycle parking at work site with protection from the weather and in a safe location easily accessed by bicyclists.	Local jurisdictions	Local Ordinances and Support, Funding	Short
Improve pedestrian facilities, prioritizing access to transit stops and activity centers	Local Jurisdictions, SCTA	Funding, Pedestrian plans	Short
Promote and seek funding for Safe Routes to Schools Projects	Local Jurisdictions, School Districts, Non-profits, SCTA	Coordination with potential project sponsors, funding	Medium
Expand Employer Commute Programs with financial incentives for employees who bicycle to work	Employers, Local Jurisdictions, SCTA	Funding	Medium
Implement and expand bikesharing, offer subsidized memberships through employers and housing developments	SCTA, Local Jurisdictions, Employers, Residential Property Managers	Funding	Medium

Strategies and Actions	Implementing Party	Implementation Needs	Implementation Time Frame
Require or encourage new bikeshare infrastructure in conjunction with other public projects and new infrastructure and development, as applicable	Local jurisdictions	Policy reform, support of private sector	Short/medium
Consider reducing parking requirements when bike share is included in new developments	Local jurisdictions	Policy Reform	Short
Include bike share information on any web-based transit trip planning tools or informational sites	SCTA, Transit Providers	Action once bike share program is in place	Short
Post wayfinding and signage directing users between bike share and transit hubs	SCTA, Transit Providers, Local jurisdictions, MTC	Funding, Wayfinding Program	Short/medium
Educate residents about how to use bike share as a transportation alternative, especially in communities with lower incomes and non-English speakers	SCTA, Local jurisdictions, Private operator	Funding, support of private sector	Short/medium
Transit Measures			
Expand bus and rail transit hours of operation and improve headway	Transit Providers, SCTA	Funding, Ridership Surveys, Implementation Plan	Medium, depends upon availability of capital and operating funds
Implement Bus Rapid Transit (BRT) and Express Bus Service	Transit Providers, Caltrans, Local Jurisdictions, SCTA	Transit Priority Measures, funding, feasibility study	Short/Long depending on extent of implementation
Extend rail transit service (SMART)	SMART	Funding	Medium/Long
Implement preferential treatment for buses on local roadways (queue jump lanes, signal preemption etc.)	Local Jurisdictions, Caltrans, SCTA	Feasibility Studies, Funding, Implementation Plans	Medium
Improve coordinated multi-operator transit marketing and customer information	Transit Providers, SCTA	Funding	Short
Expand free and discount fare programs	Transit Providers, SCTA	Funding, Feasibility Study	Short/Medium, depends upon finding additional operating funds

Strategies and Actions	Implementing Party	Implementation Needs	Implementation Time Frame
Expand bulk discount pass programs for employers, housing developments, and institutions	Transit Providers, SCTA	Funding	Short
Expand Employer Commute Programs with financial incentives for employees to take transit to work, including pre-tax benefits	Employers, Transit Providers, SCTA	Funding	Short
Expand Employer Commute Programs offering shuttle connections between work sites and SMART station or other major transit hubs	Employers, Transit Providers, SCTA	Funding	Short
Consider on-demand transit in lower ridership areas and redirect resources to high-frequency routes	Transit Providers, SCTA	Funding, Feasibility Study	Medium
Improve transit amenities (bus shelters, bulbouts, real-time information)	Transit Providers, SCTA	Funding, Implementation Plan	Medium
Land Use Improvements			
Cluster high density housing & services near transit hubs and promote compact mixed use development	Local Jurisdictions, Private Sector	Land Use Policy Reform, Zoning Reform, Marketing, Public Sector buy-in	Long
Develop transportation investment criteria that supports 4-d development strategy (density, diversity, design, destinations)	Local Jurisdictions, Private Sector	Policy	Long
Encourage infill development and carbon efficient design	Local Jurisdictions, Private Sector	Policy	Long
Work to overcome Jobs Housing imbalance. New job development should be accompanied by new housing suitable for jobs added.	Local/Regional Government, Private Sector	Land Use/Zoning Reform, Affordable Housing, Policy	Long
Encourage smaller less centralized locations for daily goods and services (small neighborhood groceries, clinics providing daily/routine proceedures away from hospitals, etc.).	Local/Regional Government, Private Sector	Land Use/Zoning Reform, Affordable Housing, Policy, Private Sector Buy-in	Long
Implement Housing Assistance Program to provide apppropiate employee housing near employer	SCTA, Local Jurisdictions, Regiona// State/ Federal Government	Land Use Policy, Zoning Reform, Marketing, Public Sector Role, Funding	Medium/long
Ridesharing			

Strategies and Actions	Implementing Party	Implementation Needs	Implementation Time Frame
Increase ridematching services	SCTA, MTC	Funding, Outreach	Short, depending on funding
Increase amenities at park and ride facilities, including secure bike lockers, EV charging, ridematch and transit marketing	Transit Providers, Caltrans, Local Jurisdictions, SCTA	Funding	Medium, dependent on funding and identifying appropriate sites
Expand Employer Commute Programs offering coordination, financial incentives, and preferential parking for carpool and vanpools	Employers, Transit Providers, Caltrans, Local Jurisdictions, SCTA	Funding	Medium
Adopt policies requiring any public partnerships with TNC's to favor ridesharing over individual rides.	Local Jurisdictions, Transit Providers, SCTA	Funding, Policy Reform	Short
Travel Demand Management			
Conduct outreach to encourage employers to implement commute programs	Local Jurisdictions, SCTA, MTC	Funding, Implementation Plan, Staff	Short
Adopt TDM ordinance with requirements for SOV reduction measures, including GreenTrip options for local municipalities, employers, and developers	Local Jurisdictions	Funding, Implementation Plan, Staff	Short
Conduct public education programs such as travel choice	Local Jurisdictions, SCTA, MTC	Funding, Implementation Plan, Staff	Short
Promote telecommuting	Local Jurisdictions, SCTA, MTC	Funding, Implementation Plan, Staff, Marketing/Outreach	Short
Promote school based TDM (school pool, Safe Routes to Schools)	Local Jurisdictions, SCTA, MTC	Funding, Implementation Plan	Short
Implement carsharing, and other shared mobility programs at new high-density developments in transit rich areas	Private Sector, Non-profits with Public Sector Support	Policy Reform, funding, marketing, support of private sector	Short
Consider reducing parking requirements when carshare is included in new developments	Local jurisdictions	Policy reform, support of private sector	Short

Strategies and Actions	Implementing Party	Implementation Needs	Implementation Time Frame
Promote Emergency Ride Home Program	SCTA, Transit, Employers	Funding	Short
Pricing			
Charge for parking at activity centers (town centers, employers, shopping centers, etc.)	Local Jurisdictions, SCTA	Policy Reform	Long (needs much public outreach)
Unbundle parking from residential and commercial leases	Local jurisdictions	Policy	Medium
Implement congestion pricing	Local Jurisdictions, SCTA	Funding for Infrastructure, Feasability study, policy reform	Medium/long
Support increases in gas tax or user fees on regional, state, and federal level	SCTA	Policy Change	Unknown
Transportation Technology Improvements			
Increase zero emissions fleets for transit, school, and municipal vehicles	Transit Providers, local jurisdictions, SCTA	Funding	Medium
Increase fuel efficiencies	State, Federal Government	Policy	Long/Medium
Accelerated school bus replacement	School Districts, SCTA, State/Federal Government	Funding, Policy	Medium
Carbon offsets	Local Jurisdictions, SCTA, Private Sector	Funding, Policy	Short/medium
Time Frame:			
Short — 1 year			
Medium — 1–3 years			
Long — 3–5 years			

A-4.4 Transportation Fund Sources

Transportation infrastructure and operations in Sonoma County are funded by a mix of local, regional, state, and federal funding. The funds are generated through various sources including, but not limited to fuel taxes, fees, and sales tax, and are administered by multiple agencies under various programs, each with their own set of regulations and limitations. Certain revenues can only be spent at the discretion of local jurisdictions, and most are limited to very specific purposes and time frames. Some of the funds are allocated to Sonoma County based on complex formulas that include factors related to population, transportation infrastructure (such as road miles or transit system revenue and performance factors), and housing. Other funds are competitive and require detailed funding applications that assess things like cost/benefit and air quality improvement.

SCTA plays a fundamental role in determining fund programming among its local jurisdictions and between Sonoma County and the rest of the Bay Area region. The Metropolitan Transportation Commission (MTC) serves as the designated recipient of much of the region's federal and State funds. The SCTA also works with the Air Districts, Caltrans and the California Transportation Commission (CTC) on funding programs.

There are three categories of funding opportunities:

1. Current fund sources in FY22
2. Fund sources to be leveraged
3. Possible future fund sources

CURRENT FUND SOURCES IN FY22

In fiscal year 2021-22 (FY22), the SCTA will manage programming from several different fund sources that could be aligned to deliver multiple types of priority projects across the County. The SCTA will issue calls for projects, score projects based on criteria and fund requirements, review programming with advisory committees and propose projects to be funded to the Board. The fund sources to be acted on this fiscal year are for programming in FY23 through FY27.

2021–2022 FUNDING OPPORTUNITIES SCTA ADMINISTERED PROGRAMMING — FY23 TO FY27

	Funding type	Est. Amount ($M)
OBAG3	Federal	$25.0
STIP	State/Fed	$8.0
STIP (CRRSAA)	Federal	$2.4
LPP(f)	State	$7.0
TDA3	State	$3.7
TFCA	State	$2.6
Go Sonoma	Local	$20.0
Reg. Mitigation Fee	Local	$4.8
	Total	**$73.5**

One Bay Area Grant (OBAG) program

SCTA administers OBAG in Sonoma County. The upcoming OBAG Cycle 3 (FY23-FY27) will be determined by MTC October of 2021. The last OBAG cycle (Cycle 2) yielded approximately $28 million across Sonoma County. Previous cycles have funded bicycle/pedestrian projects, intersection and operational improvements on local roads, as well road rehabilitation on streets in dire need of pothole repair.

Distribution Criteria

Historically SCTA has been given a share of these federal funds based on an MTC formula that included transportation and housing factors. The direct formula based approach was since questions by the Federal Highway Administration and may be discontinued. The distribution criteria for OBAG3 has not yet been established, however instead of SCTA being given a specific amount of funds MTC may provide a target to each County. The SCTA target will likely be between $20-30 million.

Project Types

A portion of these funds can be used for almost all types of transportation capital improvement projects, while a portion are limited to new or expanded transportation projects that support efforts to meet requirements under the Clean Air Act in non-attainment or maintenance areas. Examples of Clean Air eligible projects include non-recreational bicycle and pedestrian facilities, transit projects, rideshare and telecommuting activities, and signal coordination. It is expected that at least half of the funds will need to be programmed in or in service of a Priority Development Area (PDA).

State Transportation Improvement Program (STIP)

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System derived from State and federal gas tax revenues. The amount of funding to each county is determined by formula although SCTA was able to borrow ahead to help fund ready portions of the US 101. Projects must be approved by MTC and the CTC.

Project Types

Transportation projects for State highway improvements, intercity rail, and regional highway and transit improvements. Any capital project — from a new roadway or new bike path to a highway expansion or rail line extension — may be included in the STIP including buses and rolling stock. Transit operations are not an eligible expenditure. The Highway 101 project was funded with STIP and Measure M funding over the last 20 years.

Next Funding Cycle

An estimated $2.4 million will be available to program to projects in FY23 and FY24 and $8 million in FY26 and FY27. Clarity on the amount of funds available will occur in July.

Senate Bill 1 (SB1) — The Road Repair and Accountability Act of 2017 — Local Partnership Program (formulaic) (LPPf)

The Local Partnership Program provides local and regional transportation agencies that have passed sales tax measures, developer fees, or other voter-imposed transportation fees with a continuous appropriation of $200 million annually statewide to fund road maintenance and

rehabilitation, sound walls, and other transportation improvement projects. SCTA issues a call for projects for Sonoma County's share which is about $500K a year. SCTA is also eligible this year for incentive funding reserved in this program for agencies that pass new transportation sales tax measures (Go Sonoma).

SCTA's share of SB1-LPP(f) funding is estimated at $7 million over the next 5 years.

Distribution Criteria

SCTA Board approved projects based on CTC Criteria.

Project Types

SCTA has funded pedestrian crossings, sidewalk improvements and signal timing improvement projects.

Transportation Fund for Clean Air (TFCA) — county program

TFCA provides grants to the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions and improve air quality. Projects must be consistent with the 1988 California Clean Air Act and the Bay Area Ozone Strategy. SCTA is the designated agency to administer the portion of the program that comes to Sonoma County. SCTA programs TFCA program manager funds annually, with approximately $500,000 in new funds available each year. There is also a regional program administered by the Bay Area Air Quality Management District (BAAQMD).

Distribution Criteria

In October 2006, the SCTA Board set the criteria to be used for the distribution of TFCA funding. This was later adjusted in December 2013. The two-part distribution is as follows.

1. Sonoma County, City of Santa Rosa, and City of Petaluma receive guaranteed "off-the-top" funding for transit programs. Combined, the guaranteed funding for transit accounts for about 78 percent of the total program and is distributed among the recipients based on their annually updated population totals.
2. Jurisdictions within the BAAQMD Air Basin that do not operate transit — Windsor, Rohnert Park, Cotati, Sonoma, and Sebastopol — are eligible to apply for a competitive portion of the funding. If the competitive portion is not fully subscribed, it is opened up to the County, Santa Rosa, and Petaluma for application.

Project Types

- Trip Reduction — includes transit, shuttle, feeder bus, vanpool, carpool, rail-bus integration, telecommuting, congestion pricing, and other pilot projects.
- Bicycle — includes Class I, II, III, and IV bicycle facilities, bicycle parking, and bike share.
- Clean Air Vehicle and Infrastructure — includes alternative fuel vehicles, scrapping old vehicles, and alternative fuel infrastructure.

- Arterial Management — includes signal timing, transit signal preemption, and bus stop relocation.
- Infrastructure Improvements for Trip Reduction — physical improvements identified in approved plan, resulting in motor vehicle emission reductions (includes pedestrian improvements).
- Engine Replacement (Repower) and Retrofit — replace an old engine with a new, emission certified engine or retrofit it with an emission control device.

Last Funding Cycle

FY22 programmed $523,754 for electric bus purchases, transit marketing, Emergency Ride Home program and bike paths.

Transportation Development Act — Article 3 (TDA3)

This program, funded by a quarter of a cent statewide sales tax, makes funds available to pedestrian and bicycle projects. SCTA programs TDA3 funding annually, with approximately $500,000 in new funding available each year.

Distribution Criteria

Every jurisdiction in Sonoma County is allocated funds annually based on a population formula. If they cannot spend it on an eligible project they may carry it over to the next year. They may also borrow ahead multiple years to advance a project.

Eligible Project Types

- Construction and/or engineering of a bicycle or pedestrian capital project or quick build project
- Maintenance of multipurpose pathways that are closed to motorized traffic
- Restriping Class II bicycle lanes (no more than 20% of county total)
- Bicycle safety education program (no more than 5% of county total)
- Development of a comprehensive bicycle or pedestrian facilities plans (allocations to a claimant for this purpose may not be made more than once every five years)
- Funds may not be used for Class III projects on arterials or streets with posted speed limits above 25 MPH

Last Funding Cycle

In the approved FY22 list of projects Windsor received $110,000 for their Crosswalk Enhancement on Starr Road and Stellar Lane, and Healdsburg request and received $30,000 for the Front Street Sidewalk Gap Closure Project. There is an estimated $1,133,050 remaining in the program, which will be rolled over into the FY23 call for projects.

Rohnert Park Mitigation Fee

The City of Rohnert Park entered into an agreement with developers of a large residential development to pay a fee per unit into a fund to mitigate traffic impacts outside of the City limits. SCTA administers those funds, estimated to reach $7 million when development is completed,

and directs them to eligible transportation projects.

Distribution Criteria

A list of transportation projects was approved by SCTA that met the requirements of the fund source, primarily to mitigate traffic impacts caused by development of the University District. Projects will be selected from that list on a first come first served basis until the fund is depleted.

Last Funding Cycle

SMART pathway improvements received $1,000,000 and Penngrove Main Street/Adobe Road improvements received $750,000 in 2019.

SCTA Sales Tax Measures

Measure M (2005–2025)

In 2004, the voters in Sonoma County approved Measure M, the Sonoma Countywide Road Maintenance Act. Measure M is a quarter of a cent sales tax, which is forecast to generate over $27 million in FY22.

Distribution Criteria

These funds are explicitly limited to the Measure M expenditure plan.

Project Types

Only Local Street Projects (20%) and Bike & Pedestrian Projects (4%) specifically listed in the 2004 voter approved expenditure plan.

Go Sonoma (2025-2045)

In 2020, the voters in Sonoma County approved the Go Sonoma Act, another quarter of a cent sales tax to begin after Measure M ends. The Go Sonoma Act revenue in FY26 and FY27 will generate an estimated $14 million to move traffic and improve safety and an additional $6 million to build bikeways and pathways.

Distribution Criteria

These funds are limited to the Go Sonoma expenditure plan. Go Sonoma is different from Measure M in that specific projects are not listed. The move traffic and improve safety program and the build bikeways and pathways program are competitive and eligible for any project in the county that meets the program requirements.

Project Types

All types of projects that get people moving and improve safety.

FUND SOURCES TO BE LEVERAGED

In addition to the listed programs above there are also direct subventions to the local jurisdictions, competitive programs outside of SCTA Board action and possible future fund sources.

COMPETITIVE PROGRAMS OUTSIDE OF SCTA BOARD ACTION:

Senate Bill 1 (SB1) — The Road Repair and Accountability Act of 2017

SB1 invests $54 billion over the next decade to fix roads, freeways and bridges, transit and bicycle/pedestrian projects and programs. The Local Streets and Road program generates roughly $15 billion over a 10-year period, which is split equally between the County and Cities. SB1 doubled the amount of revenue that cities and counties

receive from the State for local street maintenance and rehabilitation.

In addition to formula funding, jurisdictions are eligible to compete for additional funding for active transportation and complete streets projects, congested corridor projects, goods movement improvements, and additional state matching funds for self-help counties that pass sales taxes or impose comprehensive development fees to fund transportation. A chart of SB1 programs is attached.

Active Transportation Plan, State and Regional programs (ATP).

The Active Transportation Program was created by Senate Bill 99 to encourage increased use of active modes of transportation, such as walking and biking.

The Active Transportation Program consolidated various transportation programs into a single program and was originally funded at about $123 million a year from a combination of State and federal funds. The goals of the ATP include, but are not limited to, increasing the proportion of trips accomplished by walking and biking, increasing the safety and mobility of non-motorized users, advancing efforts of regional agencies to achieve greenhouse gas reduction goals, enhancing public health, and providing a broad spectrum of projects to benefit many types of users including disadvantaged communities.

SB 1 directs $100 million annually from the Road Maintenance and Rehabilitation Account to the ATP, significantly augmenting the available funding for this popular program. State Legislators are currently considering further augmentation to the ATP program as part of the FY21/22 State Budget.

Solutions for Congested Corridors Program (SCCP)

This statewide, competitive program makes $250 million available annually for projects that implement specific transportation performance improvements and are part of a comprehensive corridor plan by providing more transportation choices while preserving the character of local communities and creating opportunities for neighborhood enhancement.

The purpose of program is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. Summer 2022 call for project.

The Local Partnership Program (competitive) (LPPc)

LPPc provides local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees with a continuous appropriation of $200 million annually to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects. SCTA issues a call for projects but other eligible agencies can apply independently as well.

The Highway Safety Improvement Program (HSIP)

HSIP codified as Section 148 of Title 23, United States Code (23 U.S.C §148), is a core federal-aid program to States for the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. The timing and size of the call is determined by the program apportionments, HSIP FTIP capacity, and the delivery of the existing HSIP projects.

State Highway Operations and Protection Program (SHOPP)

The 2020 State Highway Operation and Protection Program (SHOPP) is the State Highway System's "fix-it-first" program that funds the repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System (SHS). Fund estimate in early 2021 and Programming Fall 2021.

Regional Measure 3

To help solve the Bay Area's growing congestion problems, MTC worked with the State Legislature to authorize a ballot measure that would finance a comprehensive suite of highway and transit improvements through an increase tolls on the region's seven state-owned toll bridges. Senate Bill 595 (authored by Sen. Jim Beall of San Jose) was passed by the Legislature and signed into law by Gov. Brown in fall 2017.

Listed Projects include North Bay Transit Access, Bay Trail, SMART to Healdsburg and State Route 37.

Infrastructure for Rebuilding America (INFRA)

INFRA is a federal discretionary grant program to fund transportation projects of national and regional significance that are in line with the Biden Administration's principles for national infrastructure projects that result in good-paying jobs, improve safety, apply transformative technology, and explicitly address climate change and racial equity. The funding available for 2021 grants totals approximately $889 million

Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

RAISE Discretionary Grant program, provides a unique opportunity for the DOT to invest in road, rail, transit and port projects that promise to achieve national objectives. Previously known as the Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants, Congress has dedicated nearly $8.9 billion for twelve rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

POSSIBLE FUTURE FUND SOURCES

Additional COVID Relief similar to CRRSAA or a Stimulus from the State and/or Federal government may be made available. Proposals in the State budget are under consideration that would add one-time funding to various competitive programs.

USEFUL LINKS

One Bay Area Grants (OBAG)
https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/focused-growth/one-bay-area-grants

California Transportation Commission Programs
https://catc.ca.gov/programs

State and Federal Programs
https://dot.ca.gov/programs/local-assistance/fed-and-state-programs

Regional Measure 3
https://mtc.ca.gov/our-work/fund-invest/toll-funded-investments/regional-measure-3

Measure M 2019 Strategic Plan
https://scta.ca.gov/wp-content/uploads/2018/11/2019-StrategicPlan-final-ADA.pdf

Go Sonoma
https://scta.ca.gov/gosonoma/

State Highway Operations and Protection Program (SHOPP)
https://dot.ca.gov/programs/financial-programming/state-highway-operation-protection-program-shopp-minor-program-shopp

Infrastructure for Rebuilding America (INFRA)
https://www.transportation.gov/buildamerica/financing/infra-grants/infrastructure-rebuilding-america

Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
https://www.transportation.gov/RAISEgrants

To be eligible for most fund sources the project must be in the TIP
https://mtc.ca.gov/sites/default/files/TIP_Guide.pdf

2020 California Transportation Funding Booklet
https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/transportation-economics/transportation-funding-booklet/2020-final-transportation-funding-a11y.pdf